

# CONNEAUTTEE CREEK MITIGATION BANK

## MITIGATION SITE PLAN

JUNE 2013



*PREPARED BY:*



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## **I. INTRODUCTION**

### **A. Bank Name and Organization**

First Pennsylvania Resource, LLC (“Bank Sponsor”) proposes to establish the Conneauttee Creek Mitigation Bank (“CCMB,” “Bank Site” or “Project Site”) within the Pennsylvania Statewide Umbrella Mitigation Banking Instrument (“PSUMBI”). The purpose of the PSUMBI is to provide compensatory mitigation for unavoidable impacts to streams and wetlands as a result of activities authorized under Section 401 and 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, Pennsylvania Department of Environmental Protection (“PADEP”) Chapters 102, 105, and 106 regulatory programs, and Department of the Army Permits provided such activities have met all applicable requirements and are authorized by the appropriate agencies.

### **B. Authorities**

The establishment, use, operation and maintenance of the PSUMBI and the CCMB are carried out in accordance with the following authorities:

1. Clean Water Act (33 USC 1251 et seq.);
2. Rivers and Harbors Act (33 USC 403);
3. Fish and Wildlife Coordination Act (16 USC 661 et seq.);
4. Regulatory Programs of the Corps of Engineers, Final Rule (33 CFR Parts 320-332);
5. Guidelines for Specification of Disposal Sites for Dredged and Fill Material (40 CFR Part 230);
6. Memorandum of Agreement between the Environmental Protection Agency and the Department of the Army concerning the Determination of Mitigation Under Clean Water Act, Section 404 (b)(1) Guidelines (February 6, 1990);
7. Regulatory Guidance Letter No. 05-01. U.S. Army Corps of Engineers, February 14, 2005;
8. Compensatory Mitigation for Losses of Aquatic Resources; Final Rule. 33 CFR Parts 325 and 332, Department of the Army, Corps of Engineers and 40 CFR Part 230, Environmental Protection Agency, April 10, 2008;
9. Regulatory Guidance Letter No. 08-03. U.S. Army Corps of Engineers, October 10, 2008;
10. Pennsylvania Department of Environmental Protection, Chapters 102, 105, and 106 regulatory programs; and
11. Pennsylvania State Programmatic General Permits (PASPGP) 3 and 4 and the requirements of Title 25 PA Code 105 rules and regulations.

### **C. Location**

The CCMB is located in Cambridge Springs, Crawford County, approximately 3 miles Southeast of Edinboro, Pennsylvania. A map showing the proposed Bank Site location is included as Figure 1: Vicinity Map. A locational map providing greater detail of the CCMB is included as Figure 2: Site Location Map.



The CCMB address is:  
25797 State Highway 99  
Cambridge Springs, PA 16403

The CCMB latitude and longitude coordinates are:  
41° 50' 03.27" North  
80° 06' 18.75" West

Driving directions from the intersection of Waterford Street and Meadville Street (PA State Route 99) in Edinboro are as follows:

- Head southeast on Meadville Street (State Route 99) for 1 mile;
- Meadville Street turns into Cambridge Springs Road (State Route 99);
- Continue on Cambridge Spring Road (State Route 99) for 2 miles;
- CCMB address will be on the right. There is a brown barn with a silo.

Arrangements should be made with the Sponsor prior to visiting the CCMB.

## **II. PHASING**

This Mitigation Site Plan ("MSP") is being submitted for approval by the Interagency Review Team ("IRT") as an addendum to the PSUMBI. Upon approval, the MSP for the CCMB will be attached to the PSUMBI, and the CCMB will be deemed a component of the PSUMBI. Credits will be released consistent with the schedule of credit availability in accordance with this MSP and the PSUMBI. Credits released for the CCMB will be accounted for in the overall bank ledger for the PSUMBI. Bank Sites will have separate ledgers and separate entries in RIBITS, but all ledgers will be governed by the PSUMBI.

## **III. BANK GOALS AND OBJECTIVES**

The objective of the CCMB is to provide suitable habitat that may compensate for losses to waters of the U.S., including wetlands and streams, within the Upper Allegheny River Subbasin (State Water Plan Watershed Subbasin 16). The CCMB will provide an in-kind replacement for the direct loss or functional degradation of stream, wetland, and riparian resources that result from unavoidable aquatic resource impacts. This will be accomplished through the restoration and protection of 40.6 +/- acres of degraded wetland, stream, and associated upland/riparian corridor.

The CCMB contains two onsite streams, Torry Run and an unnamed tributary to Torry Run. Torry Run is a tributary of Conneauttee Creek within the larger French Creek watershed of Northwest Pennsylvania. The PADEP calls the French Creek one of the most biologically diverse creeks east of the Mississippi River (PADEP, 2009). Conneauttee Creek has experienced the most development of all the major French Creek tributary subbasins. Consequently, the Conneauttee Creek watershed has the lowest proportions of wetlands, forests, and shrubland of any major tributary watershed to French Creek (PNHP 2009). Typical of the Conneauttee Creek watershed, the CCMB is currently comprised mainly of palustrine system emergent wetlands ("PEM"), which are

actively grazed, along patches of palustrine system scrub-shrub (“PSS”) that have been heavily colonized by invasive plant species.

The goals and objective of the CCMB strongly align with the recommendations outlined in the most recent State of the Stream Report funded by the Pennsylvania Department of Conservation and Natural Resources (“DCNR”) in 2009. The State of the Stream Report assesses the physical stream and riparian conditions and aquatic community health of the major French Creek tributaries (Western Pennsylvania Conservancy and French Creek Project 2002). Based on this assessment, the greatest threats facing the Conneauttee Creek Subbasin are agricultural development and the spread of invasive species. The report calls for (1) the protection and restoration of riparian buffers, (2) increased use of agricultural best management practices, and (3) actions to prevent the spread of invasive species. The CCMB addresses all three of these recommendations.

Firstly, the CCMB will restore and preserve the riparian buffer for 4,182 linear feet of stream through the planting of a mix of native hardwood species promoting a diverse forest community. In addition, minor in-stream channel rehabilitation as well as major riparian buffer restoration will be conducted for the unnamed tributary onsite. This restoration action will allow for increased stream functions including sediment transport, water conveyance and storage, and improved aquatic species habitat. It also avoids disturbance of a potential Papershell Mussel habitat by restoring substantial riparian buffer without disturbing the stream channel and residing aquatic wildlife.

Secondly, the CCMB reduces the strain of intensive agriculture by removing cattle from the Bank Site. The Bank Site is currently dominated by actively grazed pasture areas providing unrestricted livestock access to streams, wetlands, and upland areas. Fencing will be erected to keep livestock off of the CCMB, and the placement of a conservation easement on the CCMB site will protect the site from development in perpetuity.

Thirdly, the CCMB is currently inundated with invasive species, namely tall fescue and reed canary grass. The CCMB will employ an intensive invasive species management plan to halt the spread of invasive species. Non-native vegetation will be removed from the CCMB. Invasive species treatment areas will then be replanted with additional native shrubs and a native wetland herbaceous seed mix.

Torry Run and the unnamed tributary to Torry Run are both designated as a Warm Water Fishery (“WWF”) under Chapter 93 of the Pennsylvania Clean Streams Law. The CCMB is located upstream from identified Natural Reproduction Trout Waters, including Little Conneauttee Creek. The development of the CCMB offers direct and significant benefits to these important onsite and downstream resource streams.

The CCMB protection areas including proposed stream channel, 100 year floodplain, Riparian Zone of Influence (RZOI), and Conservation Areas are shown on Figure 3: Protected Areas Map. The CCMB proposes to restore these resource types in the amounts described below using the indicated proposed methods:

#### Forested/Shrub-Scrub Wetlands

Total Area: 31.1 acres composed of:

Degraded/Grazed Emergent (PEM) Restoration to Forested (PFO) and/or Scrub

Shrub (PSS) wetlands: 27.9 acres

Degraded Scrub-Shrub (PSS) restoration/invasive vegetation removal 3.2 acres

#### Stream Restoration

Total Linear Footage: 4,182 LF composed of:

Minor in-channel Restoration with Riparian Restoration: 1,666 LF

Minimal In-channel Restoration with Riparian Restoration: 2,516 LF

#### Supporting Upland/Riparian

Total Area: 9.6 +/- acres composed of pasture Restoration to forested habitat

## **IV. SUITABILITY OF THE BANK SITE**

### **A. Site Selection**

The Sponsor considered multiple alternatives before arriving at the current Bank Site. Other sites evaluated were not chosen for one of the following reasons: the landowner was not willing to permanently restrict the property for economic reasons or not enough of a degraded resource was controllable to yield a significant restoration project. The sponsor visited 32 other sites in Crawford County for which the above criteria were not met. The Bank Site is a prime location for a Mitigation Bank for a multitude of reasons. The CCMB was selected firstly because of its ability to accomplish ecologically self-sustaining aquatic resources restoration, re-establishment, rehabilitation, and enhancement. The Sponsor explored the Bank Site with personnel from the Pittsburgh District, U. S. Army Corps of Engineers, PADEP Central Office, and the PADEP Northwest Regional Office, representing both the Oil and Gas and Waterways and Wetlands divisions. Following site visits, the representatives from both agencies preliminarily approved the Bank Site prior to production of full construction plans.

Both Torry Run and the unnamed tributary onsite are designated as Warm Water Fisheries (WWF) under Chapter 93 of the Pennsylvania Clean Streams Law. Additionally the Bank Site is located upstream from identified Natural Reproduction Trout Waters. The high resource value of the primary onsite stream and the degraded condition of the wetlands and streams make this an attractive site from a mitigation perspective, as there is significant potential for functional improvements. The CCMB's wetlands and streams have been degraded through historic and current agricultural activities (i.e. direct livestock access and grazing). The Bank Sponsor proposes to rehabilitate, re-establish, and conserve these degraded resources in an effort to reduce erosion, improve water quality, and increase wildlife habitat.

The location of this Bank Site will provide compensatory mitigation options to counties within Pennsylvania that are receiving pressures from evolving development in the surrounding area. Providing ecological benefits such as improvements to water quality, fish and wildlife habitat, erosion control, and flood conveyance and storage will ensure

that the aquatic resources within the watershed remain in good health. The primary service area for the CCMB is the Upper Allegheny River Subbasin (State Water Plan Watershed Subbasin 16). Secondary service areas in adjacent State Water Plan Watershed Subbasins may be allowed on a case-by-case basis. A service area map illustrating the primary service area of the CCMB is included as Figure 4: Service Area Map.

## **B. Baseline Information**

The CCMB site includes Torry Run and an unnamed tributary to the Torry Run, severely degraded and drained wetlands, and upland grass pastures. All jurisdictional streams and wetlands identified onsite have been degraded through anthropogenic alterations including historic and current agricultural activities and the establishment of non-native pasture grasses (i.e. fescue). Typical site photographs are included as Exhibit 1: Representative Site Photographs. Additional site conditions are as follows:

### **1. Soils**

The soil types depicted by the U.S. Department of Agriculture Natural Resource Conservation Service soils map within the Site boundary are all listed as hydric. The mapped locations of the soils are shown on Figure 9: Environmental Inventory Map. The identified soils and brief summary of their attributes are included below.

- Holly silty clay loam (Hz) (58%): Very poorly drained, 0-3% slopes, located in floodplains.
- Holly silt loam (Hy) (15%): Poorly drained, 0-3% slopes, located in depressions on flood plains.
- Red Hook Loam (Rh) (14%): Somewhat poorly drained, 0-5% slopes, located on outwash terraces.
- Chenango gravelly silt loam (CoA) (7%): Well drained, 0-3% slopes, located on outwash terraces and kame terraces.
- Halsey silt loam (Ha) (6%): Very poorly drained, 0-3% slopes, located depressions on outwash terraces.

### **2. Wetlands**

A wetland delineation performed in April 2013 identified the presence of approximately 27.9 acres of severely degraded wetlands and 3.2 acres of invasive-infested scrub-shrub wetlands. The approximate size and location of the wetlands identified onsite are shown on Figure 5: Mitigation Development Projection Map – Wetlands. Scrub-shrub wetlands onsite are located in the southeast corner of the property. Although partially fenced-off from livestock operations, this habitat is heavily infested with invasive species. Converted forested wetlands dominate the remainder of the site which is currently maintained as pastureland. These areas have been ditched and drained in order to enable cattle grazing. The majority of the Project Site's hydrology originates as headwaters offsite and groundwater discharge within the project limits.

The wetland and upland areas onsite all contain actively grazed pasture grasses including fescue (*Festuca pratensis*). In many of the wetland areas, the presence of these allelopathic grasses and stress from livestock grazing have altered the plant community by outcompeting the native hydrophytic vegetation. Aside from the pasture grasses,

dominant vegetation found within the wetland areas includes soft rush (*Juncus effuses*), arrow leaved tearthumb (*Polygonum sagittatum*), marshpepper knotweed (*Polygonum hydropiper*), and a variety of wetland sedges.

The PSS wetland area is dominated by Pussy Willow (*Salix discolor*) in the shrub stratum and Reed canary grass (*Phalaris arundinacea*) in the herbaceous stratum.

Indicators of wetland hydrology within the wetlands identified onsite included soil saturation within the upper 12 inches of the soil surface, a high water table, surface water, passing the FAC neutral test, and the presence of oxidized rhizospheres on living roots.

### **3. Streams**

The CCMB contains two streams: Torry Run and an unnamed tributary to Torry Run. The unnamed tributary onsite originates from small headwaters which discharge through one main channel within the CCMB. The unnamed tributary exists in a degraded condition as a result of anthropogenic alterations. A failed cattle crossing guard blocks the flow of water along the historical stream route. This impediment redirected the stream flow to form a new channel in an adjacent field. The unnamed tributary of Torry Run lacks a forested buffer, as well as stream bank stabilizing vegetation, as it flows through pasture on the Bank Site. The banks along the unnamed tributary are actively eroding and sloughing.

Torry Run flows along the northern border of the Bank Site. Torry Run lacks stabilizing stream bank vegetation, and both Torry Run and the unnamed tributary to Torry Run lack forested riparian corridors. Most of the riparian corridors consist of actively grazed field, which lack both a tree and shrub layer. In this degraded condition, this system offers limited available aquatic and terrestrial habitat, is a major source of sediment, and contributes to poor water quality downstream.

### **4. Stream and Wetland Assessment**

In order to document the existing conditions of onsite streams and wetlands, assessments were performed in accordance with the guidance outlined in the Pennsylvania Riverine Conditions Level 2 Rapid Assessment Protocol (“PA-RAP”). The PA-RAP is an assessment methodology used for determining the current condition of a stream or wetland and the compensation using mitigation credits that will result from the restoration of that resource under the Compensation Protocol. The PA-RAP results for CCMB are available upon request to any member of the IRT.

### **C. Threatened and Endangered Species**

The CCMB was screened for potential impacts to species of special concern using the Pennsylvania Natural Diversity Inventory (“PNDI”) Project Planning Review tool. The PNDI Review verified that no impacts to federally or state-listed threatened, endangered, or special concern species or resources within the Bank Site are anticipated. The receipt generated from the screening exercise is included in Exhibit 3: PNDI Receipt. Additionally, a bog turtle habitat screening was not performed given that the CCMB is located in Crawford County and not within the counties known to contain bog turtles or their preferred habitat.

The Pennsylvania Natural Heritage Program ("PNHP") has identified Core Habitat and Supporting Landscape areas associated with the Cylindrical Papershell (*Anodontoidea ferussacianus*), a Special Concern Species of mussel, within the CCMB site. Torry Run is further identified as a Biological Diversity Area ("BDA"), which is recognized as an area containing and important to the support of plants or animals of special concern at state and federal levels, exemplary natural communities, or exceptional native diversity. Within the Torry Run BDA, Core Habitat, and Supporting Landscape Areas, the PNHP recommends that restoring stable stream conditions and the addition of stream buffers should be implemented to support the Cylindrical Papershell. The CCMB complies with the PNHP's recommendations in an effort to support habitat and lifecycle elements that will assist with sustaining the current population as well as further the population density of the Cylindrical Papershell.

#### **D. Cultural Resources**

In order to gain information regarding the presence of historical and cultural resources within the project study limits, a Cultural Resource Notice Form was sent to the Pennsylvania Historical and Museum Commission ("PHMC") for review on April 24, 2013. The application is attached as Exhibit 4: Cultural Resource Clearance Application.

### **V. BANK ESTABLISHMENT**

#### **A. Determination of Credits**

Tables showing the projected stream and wetland functional credit gain using the USACE-sponsored functional model within PSUMBI are included in Exhibit 2: USACE Functional Ratio Method Calculation. Upon approval of the Compensation Protocol, either model, or both, may be used to provide compensatory mitigation. The Bank ledger is attached as Exhibit 6: Bank Ledger.

A description of the physical work delivering functional gain is described below:

##### Stream Restoration

Rehabilitation is proposed for 1,666 +/- linear feet of stream channel in the form of minor in-channel and riparian restoration on the unnamed tributary of Torry Run. The unnamed tributary currently flows through a pastured field diverting from its original course. Minor implementation of Natural Channel Design (NCD) techniques will improve the channel condition, stabilize channel banks, and re-establish hydraulic connectivity to flood prone areas. The removal of in-channel obstructions and the planting of native woody species will rehabilitate much of the pattern and profile of the stream, increasing water conveyance and storage. These actions combined with riparian buffer planting and stream bank live staking will yield increased stream functions, sediment transport, water conveyance and storage, and also provide for aquatic species habitat within the Torry Run Biological Diversity Area (BDA), namely delicate Northern Riffleshell Mussels habitat.



2,516 +/- linear feet of Torry Run will be enhanced with riparian reforestation and invasive species elimination and features that are recognized as current and potential instability contributors. The enhancement measures within Torry Run are anticipated to focus on obstructions and remnant features that are a result of beaver activity areas previously noted onsite. The enhancement measures along both of these channels will include long-term vegetative stabilization through stream bank live staking and native woody species plantings.

#### Riparian Zone Restoration and Conservation

Riparian zone restoration along both sides of the unnamed tributary onsite and along the south side of Torry Run is proposed to restore the area to native shrub and forested cover. Components of existing scrub-shrub vegetation cover areas will be enhanced as a supplement to the riparian restoration areas within the CCMB. Invasive non-native species will be eradicated and managed to establish control and restoration to native coverage species. The controlling development strategy is to establish a broad and extended riparian corridor that yields high aquatic and terrestrial habitat function.

The Conservation Easement Area includes 40.6 +/- acres including 33.0 +/- acres of wetlands and 7.6 +/- acres of riparian uplands proposed for restoration from existing grazed herbaceous dominated conditions to a diverse forested community. Heavy native woody stem plantings are proposed to improve the stream and wetland health by filtering runoff, absorbing nutrients, and providing habitat for both aquatic and terrestrial wildlife species.

#### Wetland Restoration

Wetland restoration is proposed for existing and degraded PEM dominated wetlands within the CCMB. Currently, these wetlands are actively grazed, directly accessed by livestock, and lack both tree and shrub coverage. These restoration efforts are proposed for 27.9 acres of wetlands. Enhancement is also proposed for 3.2 acres of PSS wetlands within the CCMB that lacks a diverse vegetation community and includes a presence of invasive species (reed canary grass) that will be managed to establish control and restoration to native species.

The presence of these degraded wetlands presents a valuable opportunity to elevate the function and holistic benefit of the Bank Site's overall restoration and conservation value. The current emergent vegetation within these wetlands represents a cover state that is actively altered preventing succession to a forested system. These wetland restoration measures will support the stream riparian corridor restoration in many locations onsite.

### **B. Mitigation Work Plan**

In accordance with the PSUMBI, the Mitigation Work Plan for the CCMB is attached as Exhibit 5: Mitigation Work Plan. This plan includes:

- Ditch Elimination and Plug Cross-sections
- Construction Details

- Grading Plan and Profile
- Planting Specifications
- Planting Details
- Planting and Seeding Schedules

### **C. Performance standards**

The CCMB requires no special deviation from the performance standards set forth within Exhibit A of PSUMBI.

## **VI. OPERATIONS**

### **A. Site Protection Instrument**

The Bank Sponsor has attached the proposed Site Protection Instrument for the CCMB as Exhibit 7: Site Protection Instrument. The responsibilities set forth within the Site Protection Instrument may be transferable to an acceptable conservation organization upon fulfillment of project objectives with Bank Site ownership remaining with the titled owner. The Bank Sponsor will provide for the perpetual protection and preservation of the Bank Site through maintenance agreements or restrictive covenants. These provisions will conform to the current Pittsburgh District, U.S. Army Corps of Engineers and PADEP guidance. The restrictions of the attached Site Protection Instrument have been reviewed by the IRT.

### **B. Maintenance Plan**

The Bank Sponsor agrees to perform all necessary maintenance to ensure the continued viability of the CCMB once initial construction is complete. The need to perform maintenance will be assessed in the monitoring reports and during monitoring site visits, and if deemed necessary by the Bank Sponsor or the IRT, the appropriate required maintenance will be conducted.

Following Bank Closure, all of the terms and conditions set forth in the Long-Term Management and Maintenance Plan, described in Section D of this document, will take effect.

### **C. Monitoring Requirements**

The CCMB will perform at least one monitoring report annually for a minimum of five years between Tiers 1-3 until all credits are sold or final success criteria are met, whichever is later, pursuant to Exhibit B in the PSUMBI. In any event where the Bank Sponsor can demonstrate the meeting of performance criteria culminating in a request for release of credits, a Tier 2 monitoring event shall occur. In any event of Default, a Tier 3 monitoring event will be required to demonstrate a renewal of compliance. If this Mitigation Site Plan is amended to alter crediting, a Tier 3 monitoring report will be required. In all other cases, a Tier 1 monitoring event will be the minimum allowed, unless the IRT requests otherwise, in which case the wishes of the IRT shall prevail.

#### **D. Long-term Management and Maintenance Plan**

A Long-Term Management and Maintenance Plan (“LTMM Plan”) ensures that the CCMB is managed, monitored, and maintained in perpetuity. The Bank Sponsor has set aside \$28,000 for the Long-Term Steward fee to fund the LTMM Plan. This plan, described below, establishes objectives, priorities and tasks to monitor, manage, maintain, and report on the jurisdictional waters of the U.S. within this Bank Site. An annual report will be submitted to the IRT by November 30<sup>th</sup> containing photographic information and a brief discussion of any maintenance needed keep the property in a mature non-threatened state.

- a. Periodic Patrols. At least one annual walk-through survey will be conducted to qualitatively monitor the general condition of these habitats in perpetuity. General topographic conditions, hydrology, general vegetation cover and composition, invasive species, and erosion will be noted, evaluated and mapped during a site examination. Notes to be made will include observations of species encountered, water quality, general extent of wetlands and streams, and any occurrences of erosion, structure failure, or invasive or non-native species establishment. The report should provide a discussion of any recent changes in the watershed.
- b. Invasive Species Monitoring. Each year’s annual walk-through survey (or a supplemental survey) will include a qualitative assessment (e.g. visual estimate of cover) of invasive species. Additional actions to control invasive species will be evaluated and prioritized in coordination with the IRT.
- c. Signage. Signage will be installed and maintained at property boundaries to prevent casual trespass while allowing necessary access. During each site visit, notes will be made as to the condition of signs, crossings, and property boundaries. Recommendations to implement repair or replacement to signage, crossings, or property boundary markers will be made, if applicable.
- d. Fencing. Fencing will be erected and maintained during the Initial Monitoring Period in order to prevent trespassing and allow maturation of the project. After this time the Long-Term Steward will determine the need to keep this fencing in consultation with the IRT. If there is no need, the fencing will be allowed to deteriorate naturally.
- e. Crossings and Structures. There are no crossings or other structures to maintain within the Bank Site.
- f. Forestry Management Practices. Vegetation will be reduced in any areas recommended by authorities, and as approved by the IRT, for fire control. Any practices to reduce diseased or dead vegetation will be allowed if the vegetation compromises the long-term viability of the project or any installed structure on the Bank Site.
- g. Trash and Trespass. At least once yearly trash will be removed and any necessary measures to prevent or repair damage from vandalism and trespass impacts will be taken.
- h. Right to Inspection. The IRT and its authorized agents shall have the right to inspect the CCMB and take actions necessary to verify compliance with

this Long-Term Management Plan. The Long-Term Management Plan herein shall be enforceable by any proceeding at law or in equity or administrative proceeding by the IRT, including the Corps or PADEP. Failure by any agency (or owner) to enforce the Long-Term Management Plan contained herein shall in no event be deemed a waiver of the right to do so thereafter. If the Long-Term Steward fails to succeed to adhere to the requirements Long-Term Maintenance and Monitoring Plan, the IRT Chairs may locate a new Long-Term Steward or request that the Sponsor assist in the process if occurring after Bank Closure.

#### **E. Financial Assurances**

The Bank Sponsor evaluated multiple options for Financial Assurances. The Bank Sponsor chose to use utilize a Performance Bond to fund aspects associated with the expenses identified below. The Bank Sponsor will use a performance bonding entity with a rating of A+ (Fitch Ratings). The Bank Site will be constructed to the specification of its associated NPDES and PASPGP-4 permits. A model document conforming to PSUMBI's sample document with minor alterations is attached per the bonding company's request as Exhibit 8. A complete line item budget will be provided separately to the IRT for detailed review.

Financial Assurances are required to include the following items:

- ❖ Construction/Development
  - Land Acquisition
  - Planning
  - Engineering
  - Legal Fees
  - Mobilization
  - Construction
- ❖ Initial Monitoring Period
  - Year 1-10 Maintenance, Monitoring, Reporting, and Contingency
- ❖ Fees and Costs Associated with Maintenance, Monitoring, Reporting, Contingency for Long-Term Steward
- ❖ Catastrophic Event Fund
- ❖ Costs Associated with Locating a Replacement Site

## VII. REFERENCES

- Pennsylvania Department of Environmental Protection (PADEP). 1998. "French Creek Northwest Region." Available at [http://www.dep.state.pa.us/dep/deputate/enved/watershed/piolet\\_wm.htm](http://www.dep.state.pa.us/dep/deputate/enved/watershed/piolet_wm.htm). Accessed April 2013.
- Pennsylvania Natural Heritage Program. 2008. "Cylindrical Papershell *Anodontoides Ferussacianus*." Available at <http://www.naturalheritage.state.pa.us/factsheets/12199.pdf>. Accessed April 2013.
- Smith, T.A., Meyer, E.S., and Walsh M.C. 2009. "3rd State of Stream Report: Aquatic Communities and Habitats in the Tributaries to French Creek, Pennsylvania." Published by Pennsylvania Natural Heritage Program & Western Pennsylvania Conservancy. Available at [http://www.paconserve.org/assets/3rd\\_French\\_Cr\\_main\\_rept.pdf](http://www.paconserve.org/assets/3rd_French_Cr_main_rept.pdf). Accessed April 2013.

## FIGURES



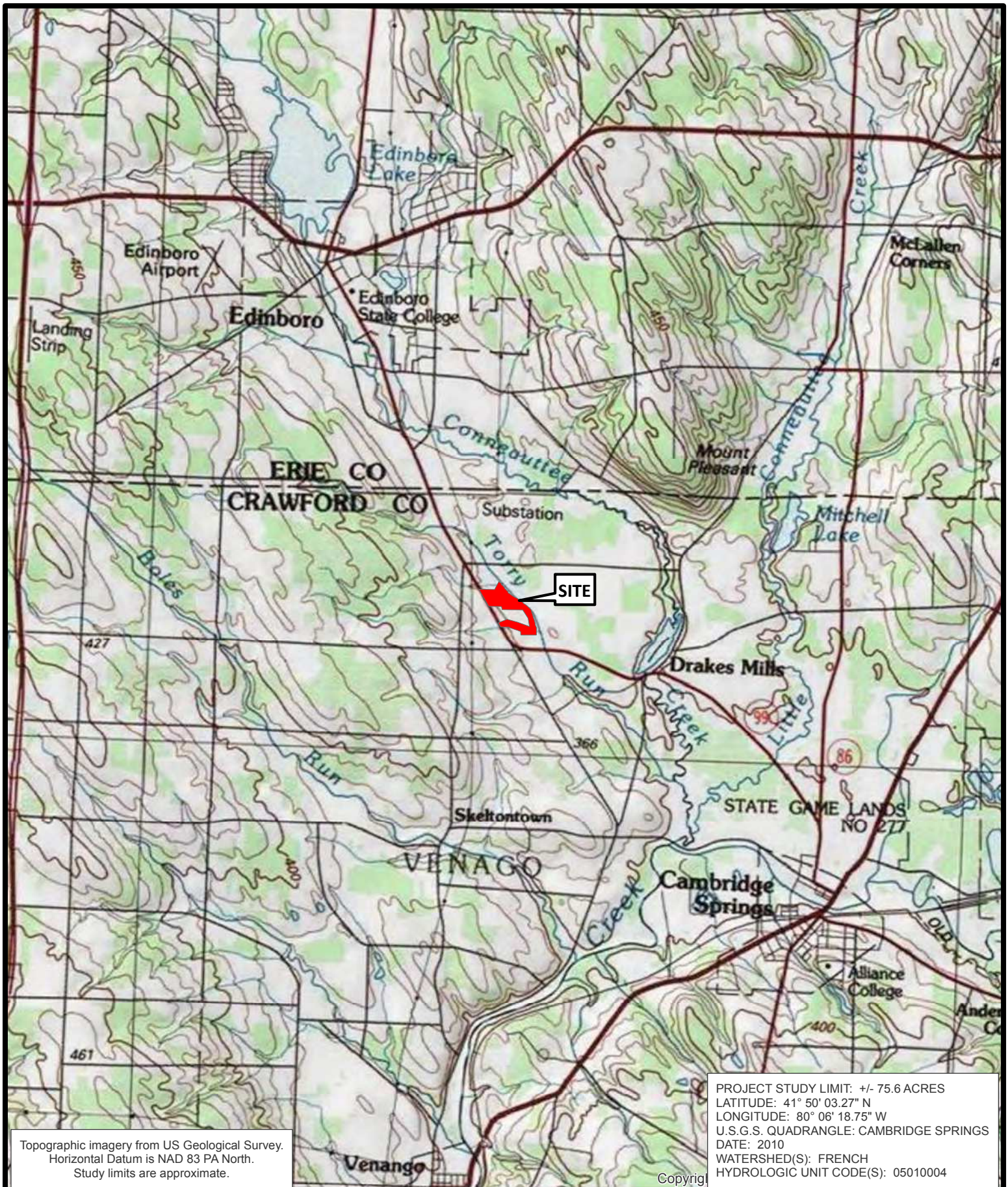


FIGURE 1

CONNEAUTTEE CREEK MITIGATION BANK  
VICINITY MAP

CRAWFORD COUNTY, PENNSYLVANIA

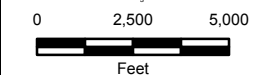


Figure1\_ConneautteeCreek\_VicinityMap.mxd



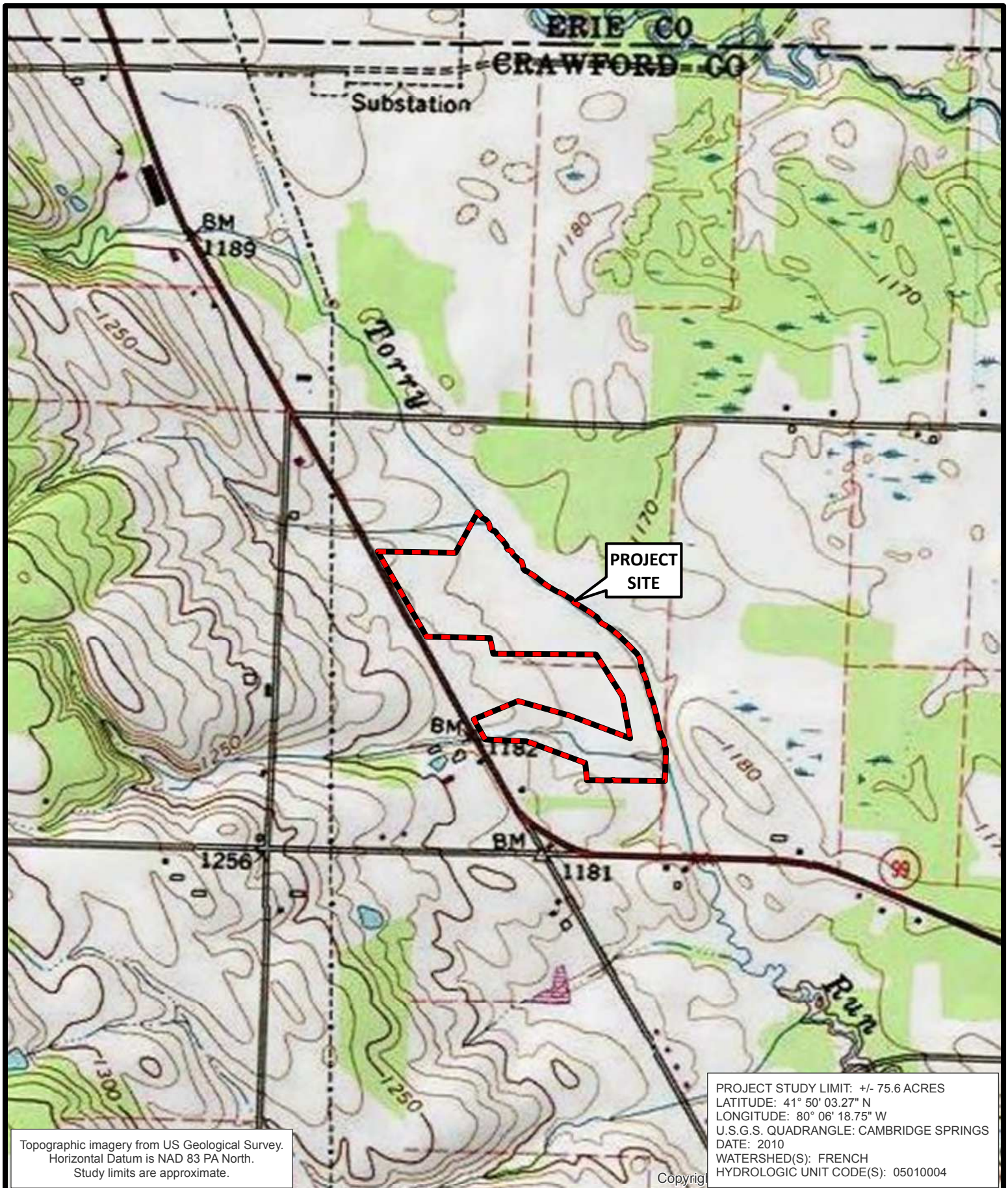


FIGURE 2

CONNEAUTTEE CREEK MITIGATION BANK  
SITE LOCATION MAP

CRAWFORD COUNTY, PENNSYLVANIA

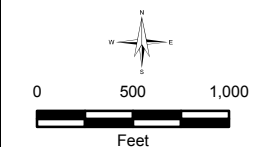
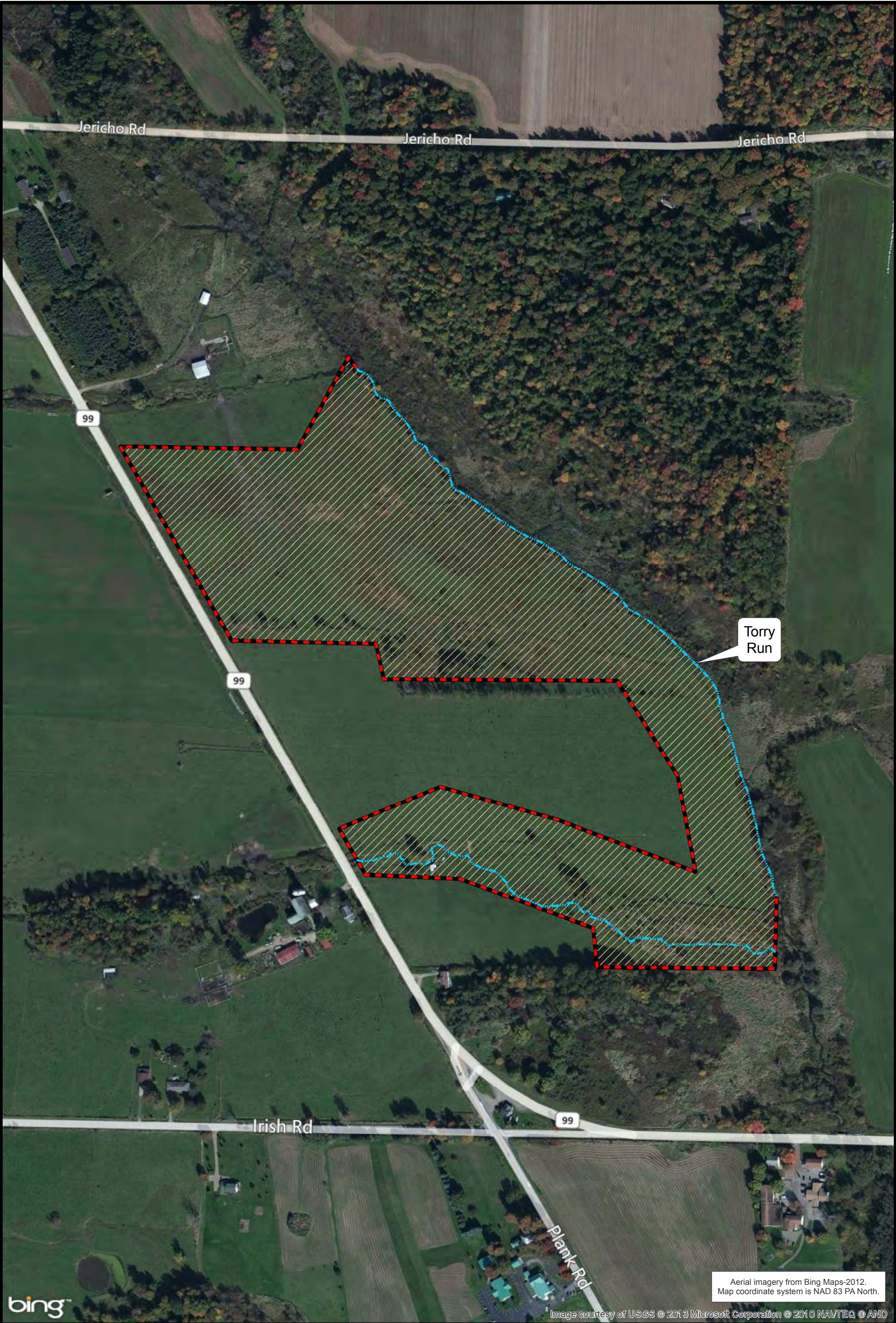


Figure2\_ConneautteeCreek\_Site LocationMap.mxd





bing™

Aerial imagery from Bing Maps-2012.  
Map coordinate system is NAD 83 PA North.

Image courtesy of USGS © 2013 Microsoft Corporation © 2010 NAVTEQ © AND

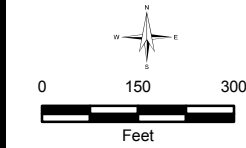


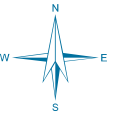
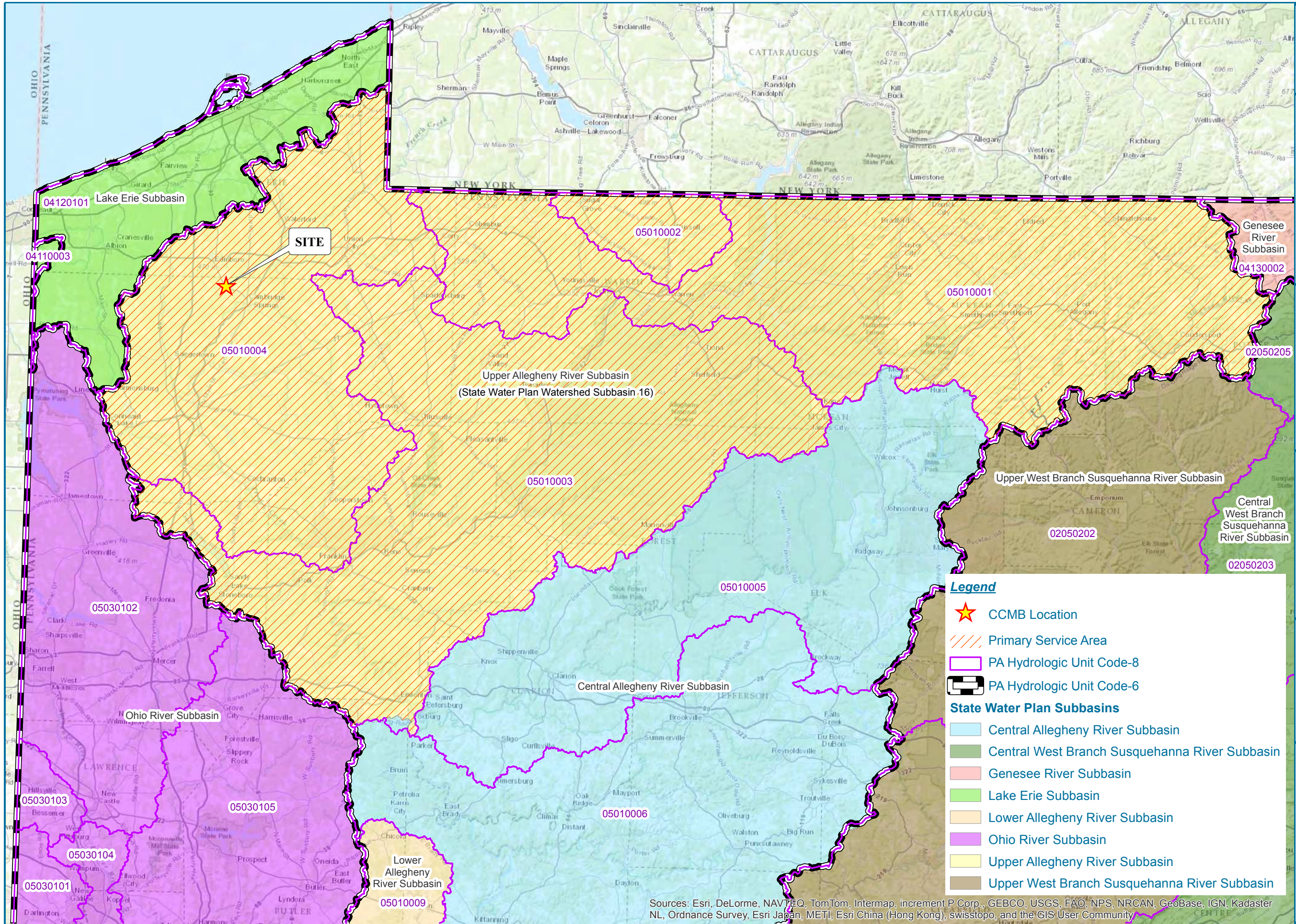
Figure3\_ConneautteeCreek\_ProtectedAreasMap.mxd

**FIGURE 3**  
**CONNEAUTTEE CREEK MITIGATION BANK**  
**PROTECTED AREAS MAP**  
**CRAWFORD COUNTY, PENNSYLVANIA**

- Legend**
- Existing Stream - 4,262 L.F.+/-
  - Conneauttee Creek Mitigation Bank Project Site - 40.6 Acres+/-
  - Total Conservation Easement Limits - 40.6 Acres +/-







0 25,000 50,000



Feet

0 2.5 5 10 15



Miles

## FIGURE 4

CONNEAUTTEE CREEK  
MITIGATION BANK

SERVICE AREA MAP

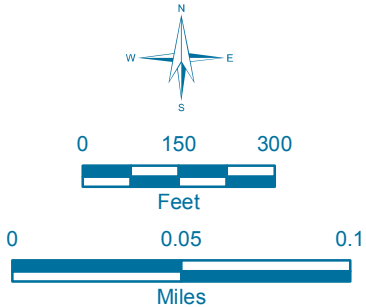
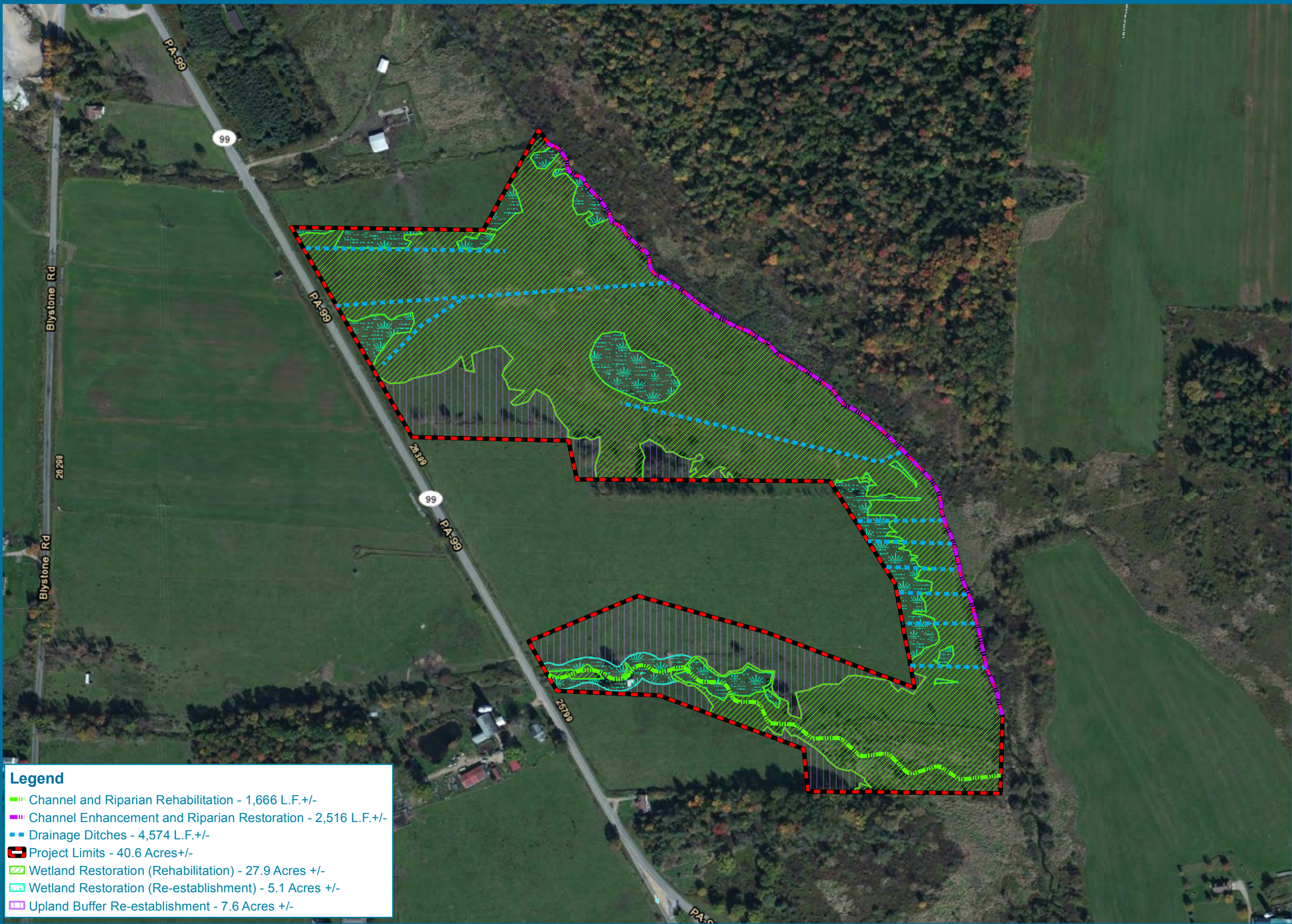
CRAWFORD  
COUNTY, PENNSYLVANIA



## REFERENCE

- 1.) State subbasin data from PA Dept. of Environmental Protection.
- 2.) Topographic imagery from ESRI Online-2012.





**FIGURE 5**

**CONNEAUTTEE CREEK  
MITIGATION BANK**

**RESOURCE  
DEVELOPMENT MAP**

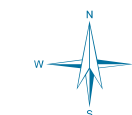
**CRAWFORD COUNTY,  
PENNSYLVANIA**

J/N: 33771  
Date: 06/19/13  
Revised: -- -- --

**REFERENCE**

- 1.) Aerial Source: USDA/FSA - Aerial Photography Field Office, Dated 2007.
- 2.) Site limits are approximate.





0 1,000 2,000  
Feet

0 0.125 0.25 0.5  
Miles

## FIGURE 6

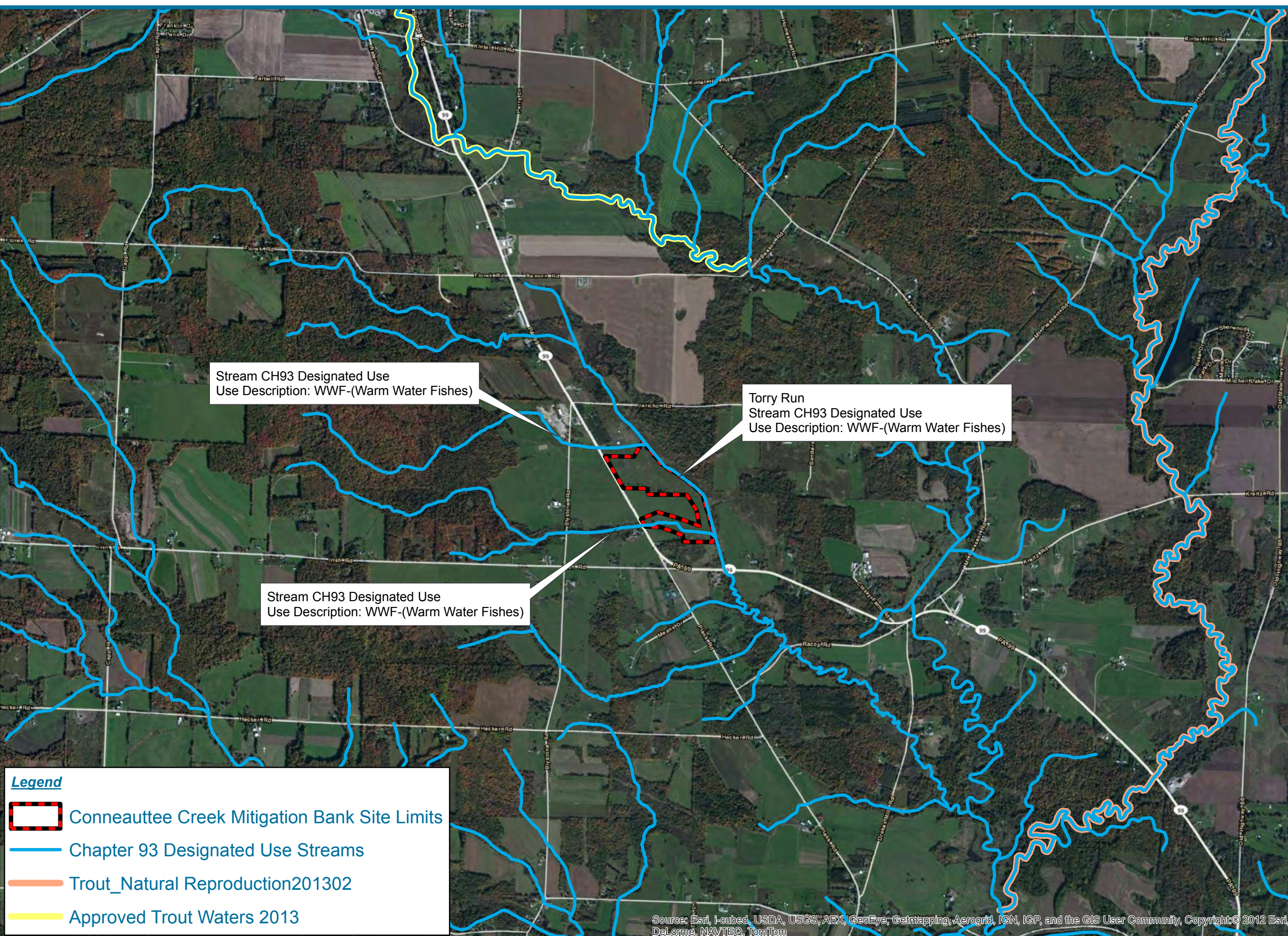
CONNEAUTTEE CREEK  
MITIGATION BANK

CHAPTER 93 USE MAP

CRAWFORD COUNTY,  
PENNSYLVANIA

## REFERENCE

- 1.) CH93 data from PA DEQ.
- 2.) Trout data from PA Fish & Boat Commission.
- 3.) Aerial imagery from ESRI Online-2011.
- 4.) Site boundary is approximate.





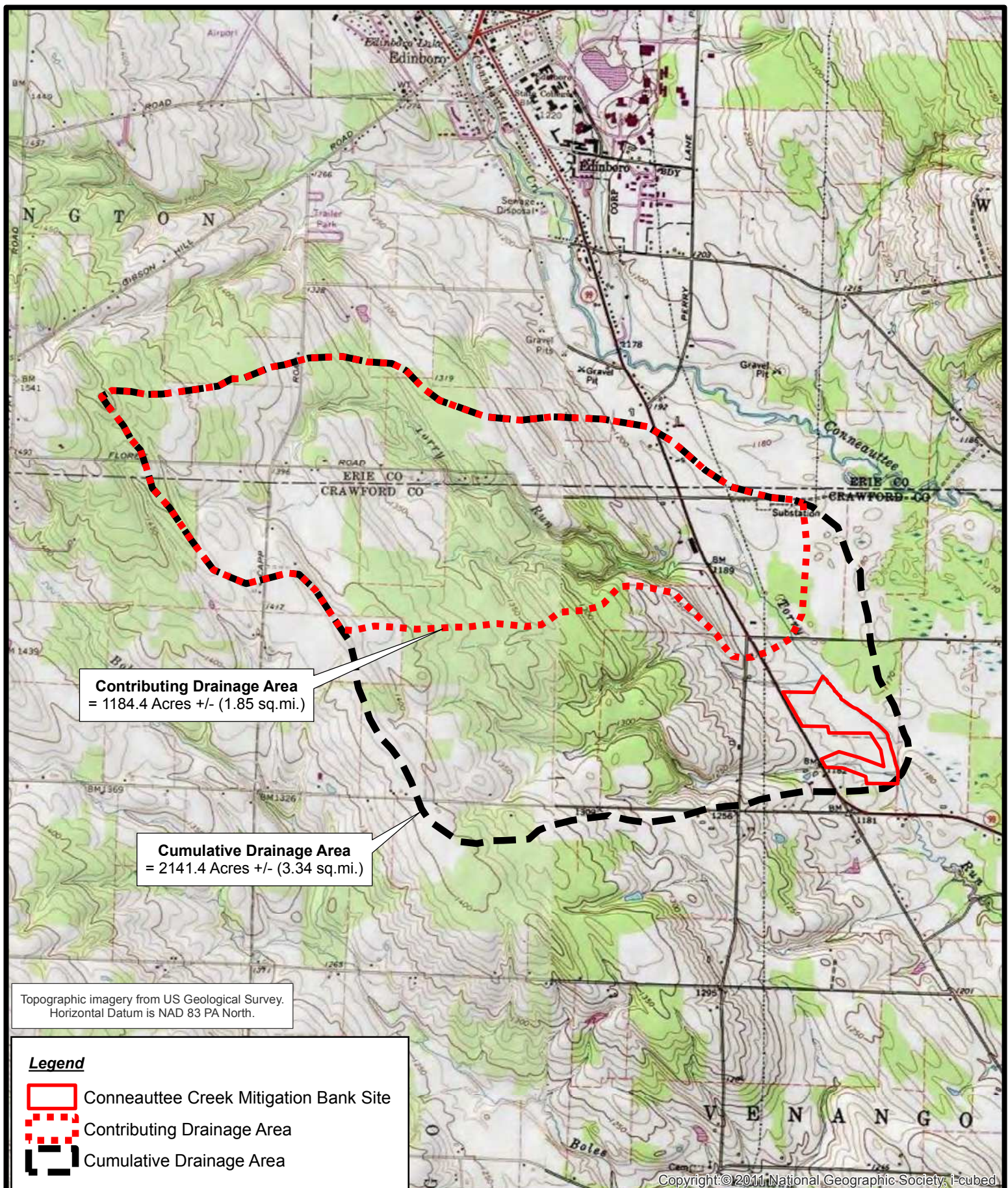


FIGURE 7

CONNEAUTTEE CREEK MITIGATION BANK  
DRAINAGE AREA MAP

CRAWFORD COUNTY, PENNSYLVANIA

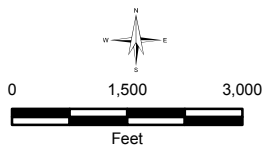
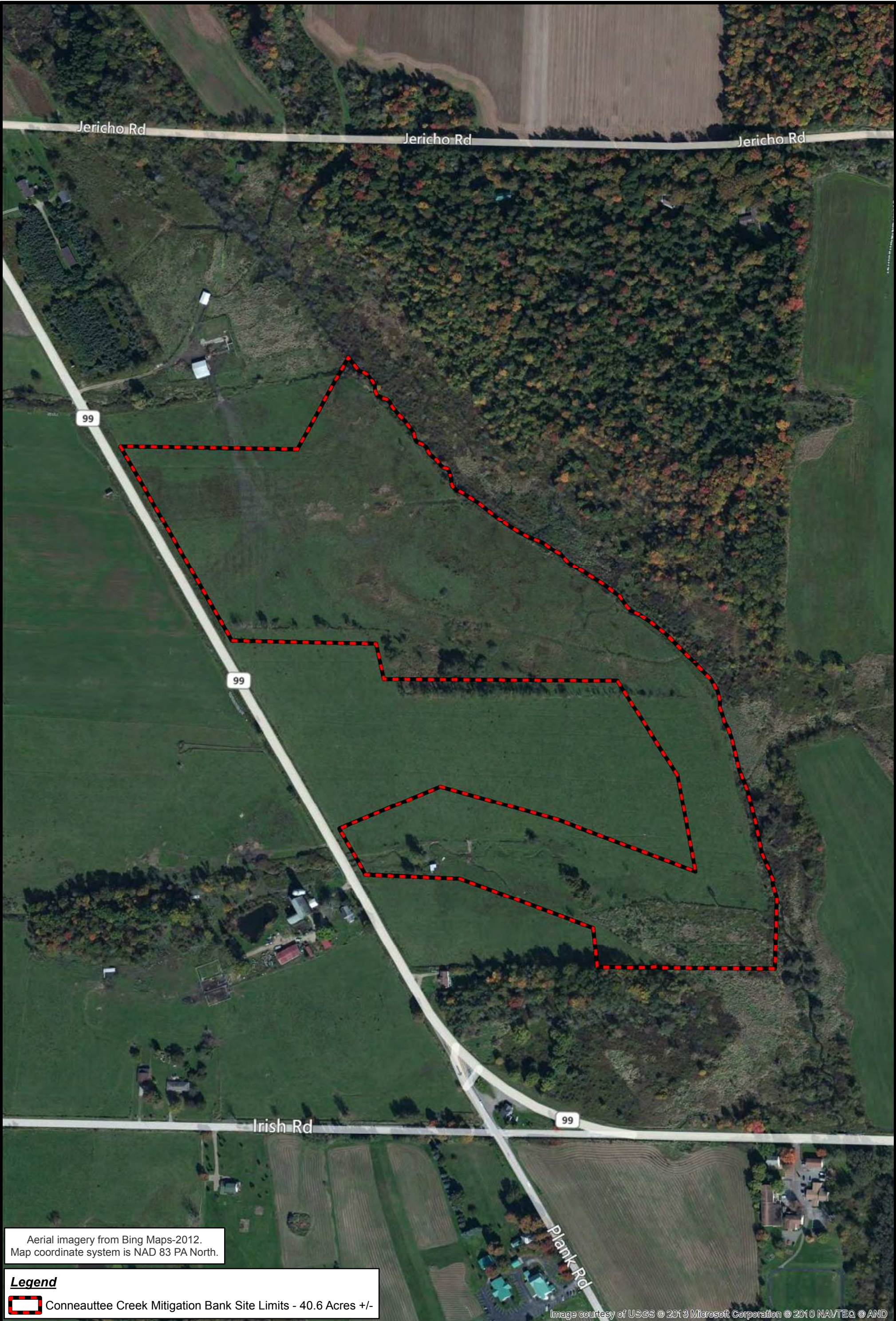


Figure7\_ConneautteeCreek\_DrainageAreaMap.mxd





Aerial imagery from Bing Maps-2012.  
Map coordinate system is NAD 83 PA North.

**Legend**  
Conneauttee Creek Mitigation Bank Site Limits - 40.6 Acres +/-

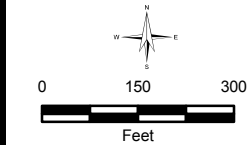


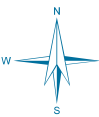
Figure8\_ConneautteeCreek\_ExistingConditionsAerialMap.mxd

FIGURE 8

CONNEAUTTEE CREEK MITIGATION BANK  
EXISTING CONDITIONS AERIAL MAP  
CRAWFORD COUNTY, PENNSYLVANIA







0 200 400  
Feet

0 0.05 0.1  
Miles

**FIGURE 9**

CONNEAUTTEE CREEK  
MITIGATION BANK

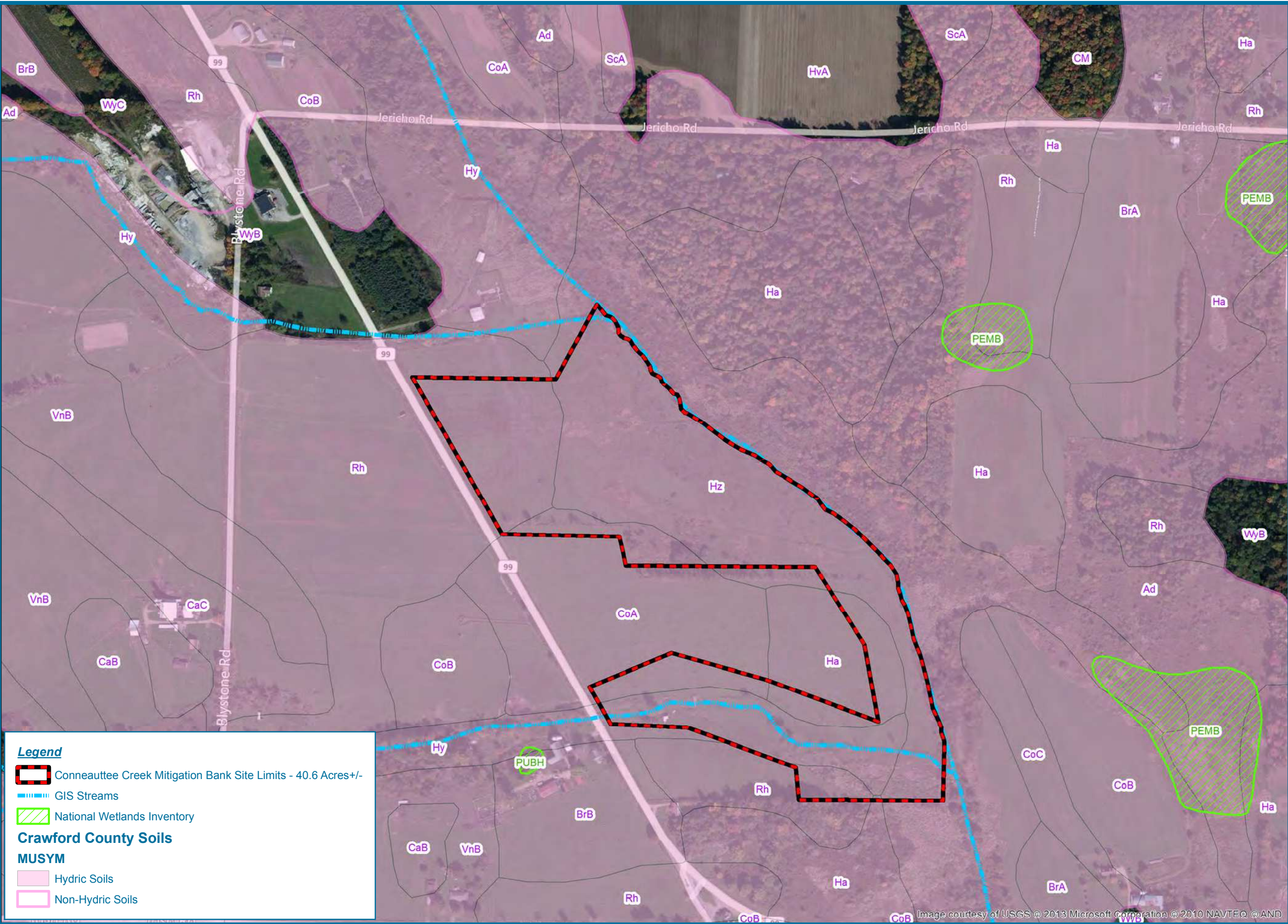
ENVIRONMENTAL  
INVENTORY MAP

CRAWFORD COUNTY,  
PENNSYLVANIA

**REFERENCE**

- 1) Wetlands data from US Fish & Wildlife Service.
- 2) Soils data from National Resources Cons. Serv.
- 3) Stream data from PA Dept. of Env. Protection.
- 4) Map coordinate system is NAD 83 PA North.
- 5) Aerial imagery from Bing Maps-2011.
- 6) Study limits are approximate.

Figure9\_ConneautteeCreek\_EIM.mxd



**Legend**

Conneauttee Creek Mitigation Bank Site Limits - 40.6 Acres+/-

GIS Streams

National Wetlands Inventory

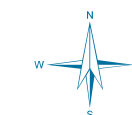
**Crawford County Soils**

**MUSYM**

Hydric Soils

Non-Hydric Soils





0 500 1,000  
Feet

0 0.125 0.25  
Miles

# FIGURE 10

CONNEAUTTEE CREEK  
MITIGATION BANK

COUNTY NATURAL HERITAGE  
INVENTORY MAP

CRAWFORD COUNTY,  
PENNSYLVANIA

## REFERENCE

1) Aerial imagery from Bing Maps-2012.

## Legend

 CNHI Core Habitat

 CNHI Supporting Landscape

 Conneauttee Creek Mitigation Bank Project Site -  
40.6 Acres+/-

 Project Site Protected Core Habitat and  
Landscape Conservation Area - 30.1 Acres+/-

 Project Site Protected Supporting Landscape and  
Landscape Conservation Area - 10.5 Acres+/-





Imagery from USGS Earthexplorer.  
Horizontal Datum is NAD 83 PA North.  
Study limits are approximate.

PROJECT STUDY LIMIT: +/- 75.6 ACRES  
LATITUDE: 41° 50' 03.27" N  
LONGITUDE: 80° 06' 18.75" W  
U.S.G.S. QUADRANGLE: CAMBRIDGE SPRINGS  
DATE: 2010  
WATERSHED(S): FRENCH  
HYDROLOGIC UNIT CODE(S): 05010004

FIGURE 11

CONNEAUTTEE CREEK MITIGATION BANK  
1956 HISTORICAL AERIAL

CRAWFORD COUNTY, PENNSYLVANIA

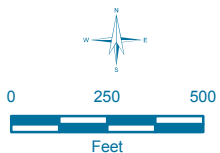


Figure11\_ConneautteeCreek\_1956Aerial





FIGURE 12

CONNEAUTTEE CREEK MITIGATION BANK  
1965 HISTORICAL AERIAL

CRAWFORD COUNTY, PENNSYLVANIA

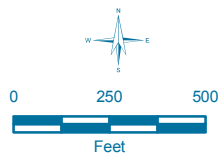


Figure12\_ConneautteeCreek\_1965Aerial



**EXHIBIT 1**

**REPRESENTATIVE SITE PHOTOGRAPHS**



Photo 1 - Unnamed tributary of Torry Run lacks a forested buffer as it flows through pasture on the proposed Project Site. (1/21/13)



Photo 2 – Unnamed tributary lacks stream bank stabilizing vegetation. (1/21/13)



## Conneauttee Creek Mitigation Bank Representative Site Photographs



Photo 3 – Cattle crossing guard that has failed and redirected flow to form a new channel in an adjacent field. (1/21/13)



Photo 4 – Unnamed tributary in its existing condition has limited habitat for aquatic species. (1/21/13)





Photo 5 – Banks along unnamed tributary are actively eroding and sloughing. (1/21/13)



Photo 6 – Riparian zone of unnamed tributary and PEM are currently used as pastures for the production of livestock. (1/21/13)





Photo 7 – Flooding of the unnamed tributary provides hydrology to the adjacent degraded PEM wetland.  
(1/21/13)



Photo 8 – Rack lines present in a degraded PEM wetland system. (1/21/13)





Photo 9 – Hydrology from historical channel joins current channel forming a pool at a livestock crossing.  
(1/21/13)



Photo 10 – Direct access to the unnamed tributary from cattle has caused degradation of the resource.  
(1/21/13)





Photo 11 – Tributary enters a scrub/shrub community where livestock is currently excluded.  
(1/21/13)



Photo 12 – Various shrubs and reed canary grass dominate the riparian community. (1/21/13)





Photo 13 – Various shrubs and reed canary grass dominate the riparian community.  
(1/21/13)



Photo 14 – PEM wetland and riparian buffer of Torry Run. (1/21/13)



Photo 15 – Drainage feature from PEM wetlands to Torry Run within pastured field. (1/21/13)



Photo 16 – PEM wetlands to be restored to PFO wetlands. (1/21/13)





Photo 17 - Riparian buffer of Torry Run lacks a sufficient tree and shrub layer to filter nutrients from adjacent uplands. (1/21/13)



Photo 18 – Beaver dam on Torry Run. (1/21/13)





Photo 19 – Torry run is currently grazed by livestock to the edge of the stream bank.  
(1/21/13)



Photo 20 – Uplands and PEM wetlands that will be restored to a forest community.  
(1/21/13)

## **EXHIBIT 2**

### **USACE FUNCTIONAL RATIO METHOD CALCULATION**

## USACE Functional Ratio Method Calculation

**Functional Ratio Method - Streams**

Habitat Type	Restoration Type	Crediting Ratio	Project Size (L.F)	Stream Credits Generated
Perennial Stream	Rehabilitation	1 : 1	1,666	1,666
Perennial Stream	Enhancement	1 : 2.5	2,516	1,006.4
<b>Total</b>				<b>2,672.4</b>

**Functional Ratio Method - Wetlands**

Habitat Type	Restoration Type	Crediting Ratio	Project Size (acres)	Wetland Credits Generated
Forested Wetland	Restoration	1 : 1	30.2	30.2
Scrub-Shrub Wetland	Enhancement	1 : 2.5	2.7	1.08
<b>Total</b>				<b>31.28</b>

**EXHIBIT 3**  
**PNDI RECEIPT**



## 1. PROJECT INFORMATION

Project Name: **Conneauttee Creek Mitigation Bank**

Date of review: **3/12/2013 1:02:49 PM**

Project Category: **In-stream / Riverine Activities and Projects, Other**

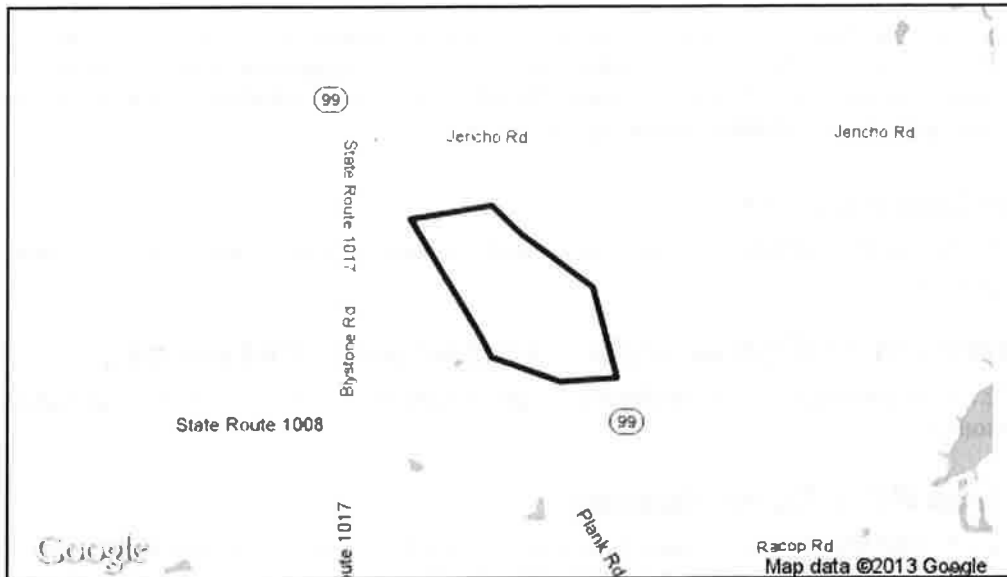
Project Area: **67.6** acres

County: **Crawford** Township/Municipality: **Venango Twp**

Quadrangle Name: **CAMBRIDGE SPRINGS** ~ ZIP Code: **16403**

Decimal Degrees: **41.836604 N, -80.101404 W**

Degrees Minutes Seconds: **41° 50' 11.8" N, -80° 6' 5.1" W**



## 2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	<b>Potential Impact</b>	<b>FURTHER REVIEW IS REQUIRED, See Agency Response</b>
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate there may be potential impacts to threatened and endangered and/or special concern species and resources within the project area. If the response above indicates "No Further Review Required" no additional communication with the respective agency is required. If the response is "Further Review Required" or "See Agency Response," refer to the appropriate agency comments below. Please see the DEP Information Section of this receipt if a PA Department of Environmental Protection Permit is required.

### 3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jurisdictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

#### PA Game Commission

**RESPONSE:** No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

#### PA Department of Conservation and Natural Resources

**RESPONSE:** No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

#### PA Fish and Boat Commission

**RESPONSE:** Further review of this project is necessary to resolve the potential impacts(s). Please send project information to this agency for review (see WHAT TO SEND).

**PFBC Species:** (Note: The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below.)

**Scientific Name:** *Anodontoides ferussacianus*

**Common Name:** Cylindrical Papershell

**Current Status:** Special Concern Species\*

**Proposed Status:** Special Concern Species\*

#### U.S. Fish and Wildlife Service

**RESPONSE:** No impacts to **federally** listed or proposed species are anticipated. Therefore, no further consultation/coordination under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) is required. Because no take of federally listed species is anticipated, none is authorized. This response does not reflect potential Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities.

\* Special Concern Species or Resource - Plant or animal species classified as rare, tentatively undetermined or candidate as well as other taxa of conservation concern, significant natural communities, special concern populations (plants or animals) and unique geologic features.

**\*\* Sensitive Species** - Species identified by the jurisdictional agency as collectible, having economic value, or being susceptible to decline as a result of visitation.

## WHAT TO SEND TO JURISDICTIONAL AGENCIES

If project information was requested by one or more of the agencies above, send the following information to the agency(s) seeking this information (see AGENCY CONTACT INFORMATION).

### **Check-list of Minimum Materials to be submitted:**

- ☒ **SIGNED** copy of this Project Environmental Review Receipt
- ☒ Project narrative with a description of the overall project, the work to be performed, current physical characteristics of the site and acreage to be impacted.
- ☒ Project location information (name of USGS Quadrangle, Township/Municipality, and County)
- ☒ USGS 7.5-minute Quadrangle with project boundary clearly indicated, and quad name on the map

### **The inclusion of the following information may expedite the review process.**

- ☒ A basic site plan (particularly showing the relationship of the project to the physical features such as wetlands, streams, ponds, rock outcrops, etc.)
- ☒ Color photos keyed to the basic site plan (i.e. showing on the site plan where and in what direction each photo was taken and the date of the photos)
- ☒ Information about the presence and location of wetlands in the project area, and how this was determined (e.g., by a qualified wetlands biologist), if wetlands are present in the project area, provide project plans showing the location of all project features, as well as wetlands and streams

## 4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. For cases where a "Potential Impact" to threatened and endangered species has been identified before the application has been submitted to DEP, the application should not be submitted until the impact has been resolved. For cases where "Potential Impact" to special concern species and resources has been identified before the application has been submitted, the application should be submitted to DEP along with the PNDI receipt. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. DEP and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at <http://www.naturalheritage.state.pa.us>.



## 5. ADDITIONAL INFORMATION

The PNDI environmental review website is a **preliminary** screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page ([www.naturalheritage.state.pa.us](http://www.naturalheritage.state.pa.us)). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

## 6. AGENCY CONTACT INFORMATION

### PA Department of Conservation and Natural Resources

Bureau of Forestry, Ecological Services Section  
400 Market Street, PO Box 8552, Harrisburg, PA.  
17105-8552  
Fax:(717) 772-0271

### U.S. Fish and Wildlife Service

Endangered Species Section  
315 South Allen Street, Suite 322, State College, PA.  
16801-4851  
NO Faxes Please.

### PA Fish and Boat Commission

Division of Environmental Services  
450 Robinson Lane, Bellefonte, PA. 16823-7437  
NO Faxes Please

### PA Game Commission

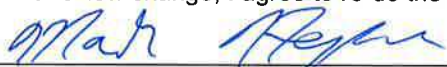
Bureau of Wildlife Habitat Management  
Division of Environmental Planning and Habitat Protection  
2001 Elmerton Avenue, Harrisburg, PA. 17110-9797  
Fax:(717) 787-6957

## 7. PROJECT CONTACT INFORMATION

Name: Mark Hepner  
Company/Business Name: Timmons Group  
Address: 1001 Boulders Parkway, Suite 300  
City, State, Zip: Richmond, VA 23225  
Phone: ( 804 ) 200-6382 Fax: ( 804 ) 560-1648  
Email: mark.hepner@timmons.com

## 8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.



applicant/project proponent signature

3-12-13

date

**EXHIBIT 4**

**CULTURAL RESOURCE CLEARANCE APPLICATION**





1001 Boulders Parkway  
Suite 300  
Richmond, VA 23225

P 804.200.6500  
F 804.560.1016  
[www.timmons.com](http://www.timmons.com)

April 22, 2013

Mr. Steven McDougal  
Pennsylvania Historical and Museum Commission  
Bureau of Historic Preservation  
Commonwealth Keystone Building, 2<sup>nd</sup> Floor  
400 North Street  
Harrisburg, PA 17120-0093

**RE: Request to Initiate Consultation  
Conneauttee Creek Mitigation Bank  
Venango Township, Crawford County**

Dear Mr. McDougal,

I am pleased to provide the attached Request to Initiate Consultation for the Conneauttee Creek Mitigation Bank (Site) to the PHMC for review. The Site is located in Venango Township within Crawford County. The purpose of this coordination request is to ensure that the proposed stream and wetland restoration project does not impact cultural resources.

A review of the Site's existing site conditions was conducted by Circa ~ Cultural Resource Management (Circa~) on behalf of First Pennsylvania Resources (FPR), a wholly owned subsidiary of Resource Environmental Solutions (RES). A Management Summary based on the review results was completed to support this Consultation request. Based on the results of the project review, Circa~ recommends that the proposed project will not have any impacts to any archaeological sites listed on or potentially eligible for listing on the National Register of Historic Places. Therefore, no further work is recommended. A copy of Circa's~ site research and report is attached for your review along with multiple project condition maps to assist with your project review and determination.

Please review the attached information supporting the federal and state permitting efforts which will authorize the construction of the Conneauttee Creek Mitigation Bank. I will give you a call on Friday, April 26<sup>th</sup> to answer any questions that you may have about the project. Until then, please do not hesitate to contact me directly at (804) 200-6381 or Circa's~ Lead Archaeologist, Carol Tyrer at (757) 880-4187 if you have any questions or require additional information. Thank you for your time and attention to this project.

Respectfully,  
Timmons Group



Ben Snyder, EIT  
Environmental Scientist

CC: Carol Tyrer, Circa ~ Cultural Resource Management (via electronic mail)



**PREPARED BY:**



380 SOUTHPOINTE BLVD., SUITE 405  
CANONSBURG, PA 15317

## **CONNEAUTTEE CREEK MITIGATION BANK REQUEST TO INITIATE SECTION 106 CONSULTATION**

**APRIL 2013**



**PREPARED IN CONSULTATION WITH:**



1001 BOULDERS PARKWAY, SUITE 300  
RICHMOND, VIRGINIA 23225  
PHONE: 804.200.6500  
FAX: 804.560.1648  
WWW.TIMMONS.COM  
TIMMONS GROUP PROJECT No. 33771

# **CONNEAUTTEE CREEK MITIGATION BANK**

## **REQUEST TO INITIATE SECTION 106 CONSULTATION**

### **TABLE OF CONTENTS**

#### **EXHIBITS**

Exhibit 4a	Project Review Form
Exhibit 4b	Circa~ Management Summary
Exhibit 4c	Representative Site Photos and Location
Exhibit 4c	Map Site Maps <ul style="list-style-type: none"><li>• Vicinity Map</li><li>• Site Location Map</li><li>• Project Limits Aerial Map</li><li>• Topographic Map</li><li>• Existing Land Cover Map</li><li>• Project Grading and Disturbance Map</li></ul>



**EXHIBIT 4A**  
**PROJECT REVIEW FORM**



# PROJECT REVIEW FORM

## Request to Initiate SHPO Consultation on State and Federal Undertakings

### SHPO USE ONLY

DATE RECEIVED:

ER NUMBER:

REV: 5/2012

### SECTION A: GENERAL PROJECT INFORMATION

Is this a new submittal? ☒ YES ☐ NO OR ☐ This is additional information for ER Number:

Project Name Conneauttee Creek Mitigation Bank

County Crawford

Project Address 25797 State Highway 99

City/State/ Zip Cambridge Springs PA 16403

Municipality Venango Township

### SECTION B: PRIMARY CONTACT INFORMATION

Name Ben Snyder

Phone (804) 200-6381

Company Timmons Group

Fax (804) 560-1648

Street/P.O. Box 1001 Boulders Parkway, Suite 300

Email Ben.Snyder@timmons.com

City/State/Zip Richmond VA 23225

### SECTION C: PROJECT DESCRIPTION

This project is located on:  
(check all that apply) ☐ Federal property ☐ State property ☐ Municipal property ☒ Private property

List all Federal and State agencies and programs (funding, permits, licenses) involved in this project	Agency Type	Agency/Program/Permit Name	Project/Permit/Tracking Number (if applicable)
	State	PADEP/ CWA 404 & NPDES	
	Federal	USACE/ CWA 401/Chapter 105	

### Proposed Work – Attach project description, scope of work, site plans, and/or drawings

Project includes (check all that apply): ☒ Construction ☐ Demolition ☒ Rehabilitation ☐ Disposition

Total acres of project area: 40.6 Total acres of earth disturbance: 40.6

Are there any buildings or structures within the project area? ☒ Yes ☐ No Approximate age:

This project involves properties listed in or eligible for listing in the National Register of Historic Places, or designated as historic by a local government	Yes <input type="radio"/>	No <input type="radio"/>	Unsure <input checked="" type="radio"/>	Name of historic property or historic districts	Unknown
---	------------------------------	-----------------------------	--	---	---------

Please print and mail completed form and all attachments to:

PHMC  
State Historic Preservation Office  
400 North St.  
Commonwealth Keystone Building, 2<sup>nd</sup> Floor  
Harrisburg, PA 17120-0093

### Attachments – Please include the following information with this form

- ☒ Map – 7.5' USGS quad showing project boundary and Area of Potential Effect
- ☒ Description/Scope – Describe the project, including any ground disturbance and previous land use
- ☒ Site Plans/Drawings – Indicate the location and age, if known, of all buildings in the project area
- ☒ Photographs – Attach prints or digital photographs showing the project site, including images of all buildings and structures keyed to a site plan

### SHPO DETERMINATION (SHPO USE ONLY)

SHPO REVIEWER:

There are **NO HISTORIC PROPERTIES** in the Area of Potential EffectThe project will have **NO ADVERSE EFFECTS WITH CONDITIONS** (see attached)The project will have **NO EFFECT** on historic properties**SHPO REQUESTS ADDITIONAL INFORMATION** (see attached)The project will have **NO ADVERSE EFFECTS** on historic properties:



**EXHIBIT 4B**

**CIRCA~ MANAGEMENT SUMMARY**

*Circa~ Cultural Resource Management, L.L.C.  
453 McLaws Circle, Suite 3  
Williamsburg, Virginia 23185  
(757) 220-5023*

**Circa~ Management Summary  
Conneauttee Creek Mitigation Bank  
Crawford County, Pennsylvania  
April 2013**

**Introduction**

In March 2013, Circa~ Cultural Resource Management, LLC (Circa~) conducted a review and site visit of the Conneauttee Creek Mitigation Bank (Site) located in Crawford County, Pennsylvania. The property consists of approximately 40.6 acres as shown in Exhibit 4: Site Maps. First Pennsylvania Resource, LLC. (Sponsor), a wholly owned subsidiary of Resource Environmental Solutions (RES), proposes to establish the Site. The Site is located three miles southeast of Edinboro, Pennsylvania and is generally bounded by Cambridge Springs Road (State Route 99) to the west, Jericho Road to the north, Torry Run to the east, and scrub-shrub wetlands and mid-successional forest to the south. The Site drains to Torry Run and is located in the French Subbasin – HUC 05010004 (a contributing watershed within State Water Plan Watershed Subbasin 16).

Currently the Site resides in actively grazed pasture land, degraded palustrine emergent (PEM), and scrub-shrub (PSS) wetlands. The PEM and PSS wetlands onsite are generally found within the floodplain of Torry Run and the unnamed tributary of Torry Run. The two streams are located onsite; Torry Run is the main stream channel flowing north to south and an unnamed tributary of Torry Run flows west to east in the southern portion of the property. Torry Run has only minor instability issues while the unnamed tributary is experiencing instability due to improper dimension, pattern, and profile. Both streams exhibit all or some of these properties due to hoof shear stress, channelization, lack of riparian buffer, and inadequate access to their floodplains.

The goal of the project will be to restore and preserve self-sustaining, functional stream, wetland, and riparian corridors to replace the functions and values lost from adverse impacts to streams and wetlands due to various authorized development projects within the French Subbasin (State Water Plan Watershed Subbasin 16). The development efforts will provide an in-kind replacement for the direct loss or functional degradation of stream, wetland, and riparian resources that result from unavoidable aquatic resource impacts. In addition, the structural establishment of these functional improvements in advance of the compensated functional impacts will serve to eliminate the temporal loss of function which may result from alternative mitigation approaches.

The project will include a combination of restoration or conservation of all stream channels, wetlands, and associated riparian areas onsite, adjacent to the stream. Targeted



aquatic functions to be restored include improvements to wildlife habitat, water quality, floodplain conveyance and storage, and erosion control through the implementation of natural channel design, vegetation controls, and long-term land protection.

Restoration modifications will vary as appropriate throughout the Site and will include but are not limited to natural channel design techniques, channel cross section and pattern corrections, stream bank stabilization and bioengineering techniques, grade control, in-stream structures, and establishment of forested riparian buffers. The project will also restore and conserve riparian zones along both banks of the streams and wetlands identified within the limits of the conservation easement. The width of the riparian zone will vary throughout the site depending on the Site constraints. The Site is being entered into a perpetual conservation easement by the Sponsor. Additional detail regarding these measures has been provided in Exhibit 4: Site Maps.

### **Environmental Background**

The primary reasons for incorporating environmental studies into archaeological projects is to learn of possible environmental constraints or lack of constraints, to determine the presence or absence of critical resources that might have influenced site distribution, and to discover environmental factors (erosion, deposition, subsidence, and historic land use patterns) that might influence the integrity of archaeological sites once they have formed. Keeping these objectives in mind, a brief environmental summary of the Site is provided below.

The topography of the Site consists of a very gradual sloping landform that terminates at the streambank of Torry Run. The gradual side slopes extend into the Site from the west and drain the uplands into the stream channel. Elevations within the Site range from 1,180 feet above mean sea level (AMSL) at the western portion of the property to 1,160 feet AMSL along the bank of the stream.

Aerial photos from 2005 to the present show little change within the Site during the last eight years (Figures 1 - 5).

### **Soils Identified Within the Site**

According to the Natural Resources Conservation Service (NRCS), at least five different soil types and soil type variants exist within the Site. These soil types and variants include Holly silty clay loam, Holly silt loam, Red Hook loam, Chenango gravelly silt loam, Halsey silt loam with 0% to 3% slopes. Each of these types and variants are described below including references to drainage, hunting and gathering potential, and horticultural and agricultural productivity potential. Further, conclusions regarding the suitability of each for historic and Native American occupation and archaeological site probability are also explained.

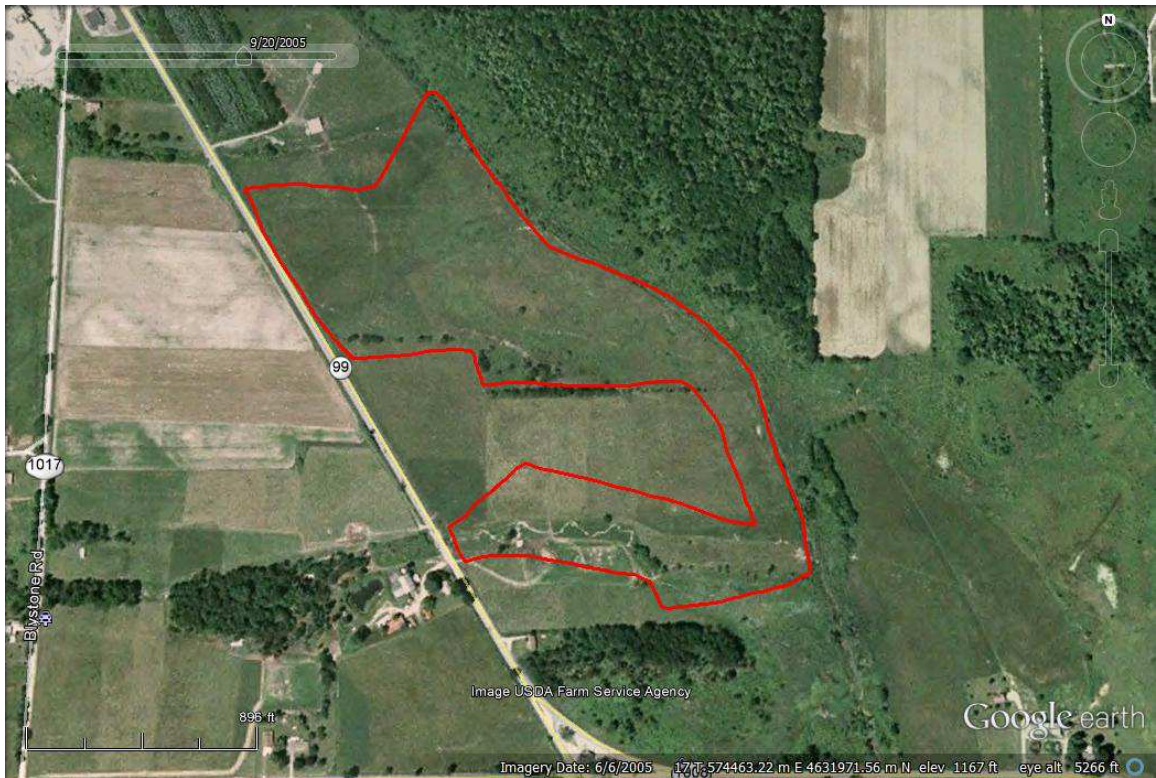


Figure 1. 2005 aerial view of Site from Google Earth.



Figure 2. 2006 aerial view of Site from Google Earth.





Figure 3. 2008 aerial view of Site from Google Earth.



Figure 4. 2010 aerial view of Site from Google Earth.





Figure 5. Current aerial view of Site from Google Earth.

Holly silty clay loam (Hz) is the primary soil identified within the Site covering approximately 58% of the central, eastern, and southeastern portions of the Site (Figure 6). Holly silt loam (Hy) is identified within the central and southern portions of the Site covering approximately 15% of the Site. Red Hook loam (Rh) is identified within the northwestern portions of the Site covering approximately 14% of the Site. Chenango gravelly silt loam, 0% to 3% slopes (CoA) is identified within the eastern portions of the Site covering approximately 7% of the Site. Halsey silt loam (Ha) is identified within the eastern and southern portions of the Site covering approximately 6% of the Site.

#### *Holly Silt Loam (Hy, Hz)*

Holly silt loam soil is a very deep, poorly to very poorly drained soil that formed in loamy alluvium found on broad flat areas and in slight depressions on floodplains receiving alluvium from upland areas of low-lime drift and noncalcereous sandstone and shale (NRCS 2013). Solum thickness ranges from 20 to 44 inches and the average clay content ranges from 18% to 20% throughout the solum. This soil also features negligible to low surface runoff. Some areas have been cleared and used for pasture and cultivation. Many areas of this soil are used as natural areas for wetland wildlife habitat. Native vegetation consists of soft maple, elder, willow, and other trees tolerant of wet sites.





Figure 6. Site soil map, from NRCS website.

#### *Red Hook Loam (Rh)*

Red Hook loam soil is a very deep, somewhat poorly drained soil that formed in Wisconsin age glaciofluvial deposits found on outwash plains and terraces, stream terraces, and moraines (NRCS 2013). Solum thickness ranges from 20 to 40 inches and this soil also features a negligible to very high surface runoff. Most areas containing this soil were cleared and used for pasture, hay, oats, and corn. The woodlots consist of elm, red maple, sugar maple, ash, and hemlock.

#### *Chenango Gravelly Silt Loam (CoA)*

Chenango gravelly silt loam soil is a very deep, well to somewhat excessively drained soil that formed in water sorted materials found on outwash plains, kames, eskers, terraces, and alluvial fans (NRCS 2013). In some areas, the soil formed in alluvial deposits. Solum thickness ranges from 24 to 50 inches and depth to bedrock is over 60 inches in this moderately acidic to very strongly acidic soil. Rock fragments range from pebbles to flagstones and content ranges from 10% to 50% throughout the solum. This soil also features a negligible to high surface runoff. Most of the lesser sloping areas of this soil are cleared and used mainly for hay, corn, and small grains, with vegetables and grapes in localized areas. Areas with increased slopes are used for pasture and hay. Woodlots consist of sugar maple, red maple, American beech, ash, eastern hemlock, and eastern white pine in the northernmost areas with oak and hickory in the southern portion.

#### *Halsey Silt Loam (Ha)*

Halsey silt loam soil is a very deep, very poorly drained soil that formed in glaciofluvial deposits and outwash derived mainly from quartz, slate, shale, and sandstone with some limestone, granite, gneiss, and schist found on level or nearly level terrace and

floodplains (NRCS 2013). Occasionally this soil is also found in seepage areas of steeper sloping terraces. Solum thickness ranges from 20 to 39 inches and depth to bedrock is over six feet in this neutral to strongly acid soil. The content of coarse fragments ranges from 0% to 35% throughout the solum. This soil also features slow surface drainage and a negligible to low runoff and has a seasonal high water table near the surface throughout the year unless drained. This soil is ponded to 0.5 feet above the surface and west from the surface to 0.5 feet and the soils on low terraces are subject to occasional or frequent flooding. This soil is mostly wooded and can support elm, red maple, ash, willow, sedges, and rushes. Some areas are cleared and used for pasture, vegetables, and hay.

### **Bureau for Historic Preservation (BHP) Cultural Resources GIS (CRGIS) File Research**

Circa~ performed an archival search for the Site using the CRGIS on the Pennsylvania Historical and Museum Commission (PHMC) website on March 11, 2013. This research was completed to determine if historic resources exist within the Site. The search identified no archaeological resources and no architectural resources within 1,000 feet of the Site. One cultural resource survey was completed within 1,000 feet of the Site. This included a *Phase I Cultural Resource Survey, Property of CNG Pipeline Corridor* completed by WAPORA in October 1981. Figures 7 and 8 show the approximate Site and buffer area (orange shaded area) and surveys completed within close proximity.

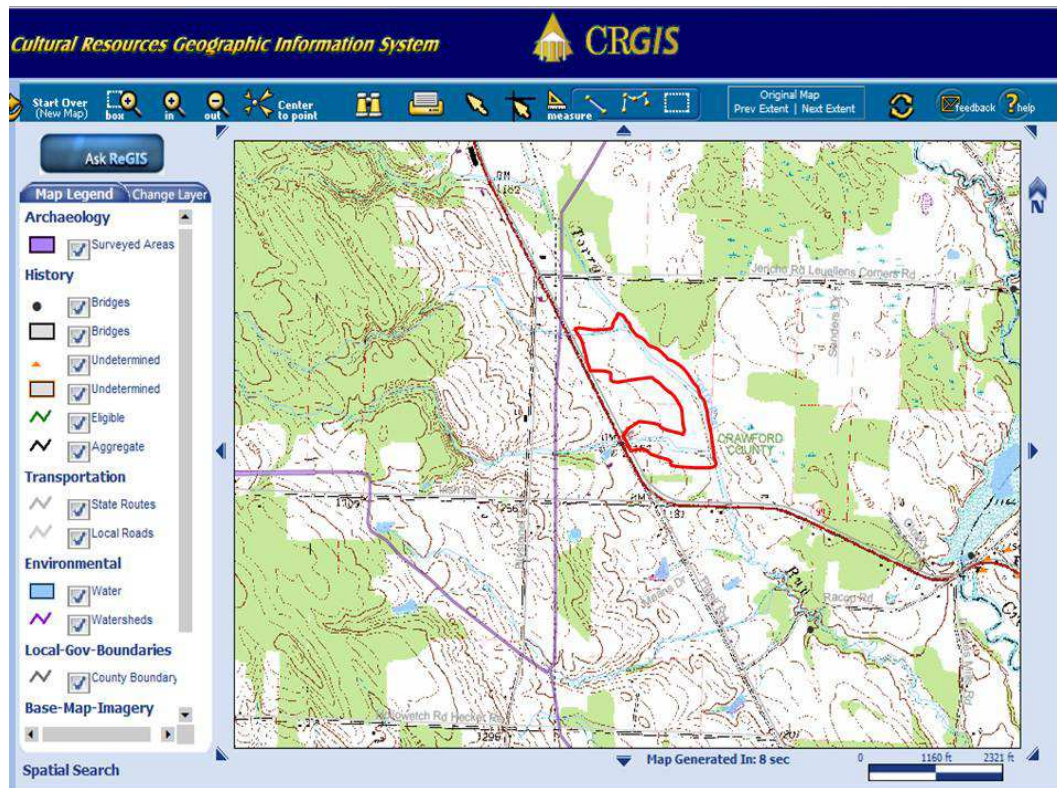


Figure 7. Site Map from CRGIS on PMHC website.



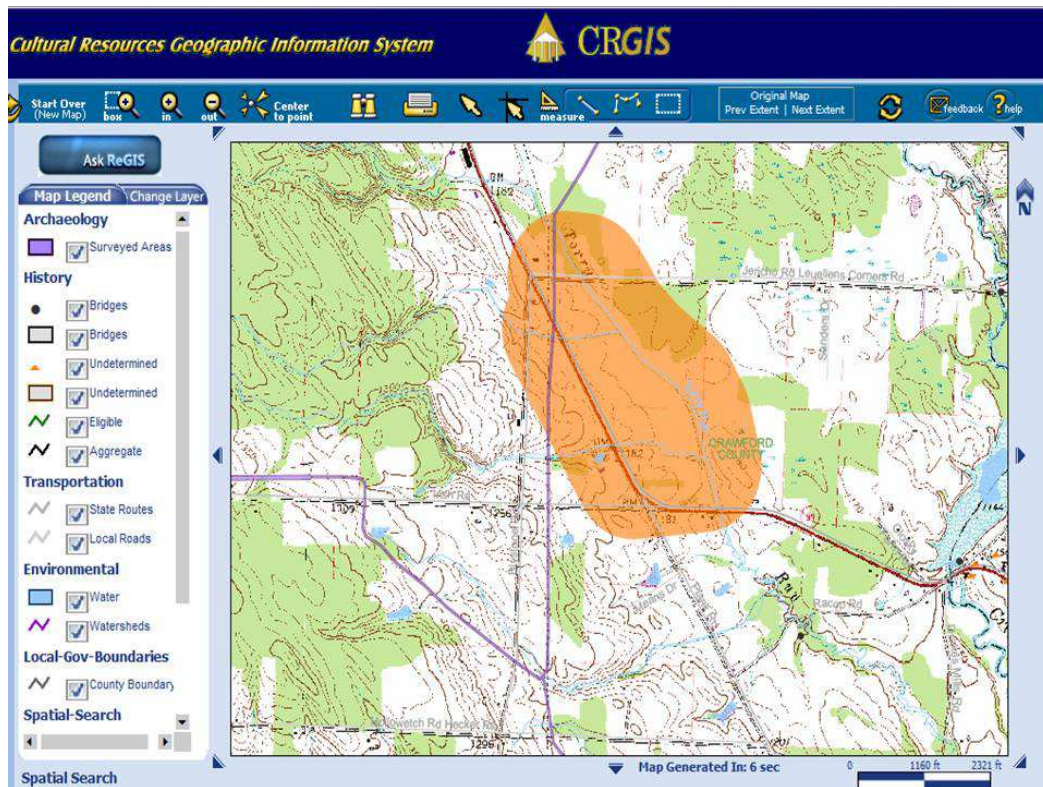


Figure 8. Map of 1,000-foot buffer area around Site.

## Results and Summary

Within the Site there is one ca. mid 20<sup>th</sup> century shed (Figure 9). This shed is associated with a house complex just to the southwest of the shed and the Site. The shed is located close to Route 99 on the east side of the road surrounded by an open field. The shed is situated on level ground that slopes gently from the north to the south.

### *Shed 1*

This ca. mid 20<sup>th</sup> century, one-story, one-bay, shed roof, wood-frame shed is clad in vertical wood plank siding painted white and resting on a wood pier foundation (Figure 10). The shed is open on the side (west) and rear (north) elevations exposing the wood framing. The roof is covered in corrugated metal with exposed rafter tails. No windows are visible on the shed. The entrance on the façade is a single-leaf opening covered in plywood.



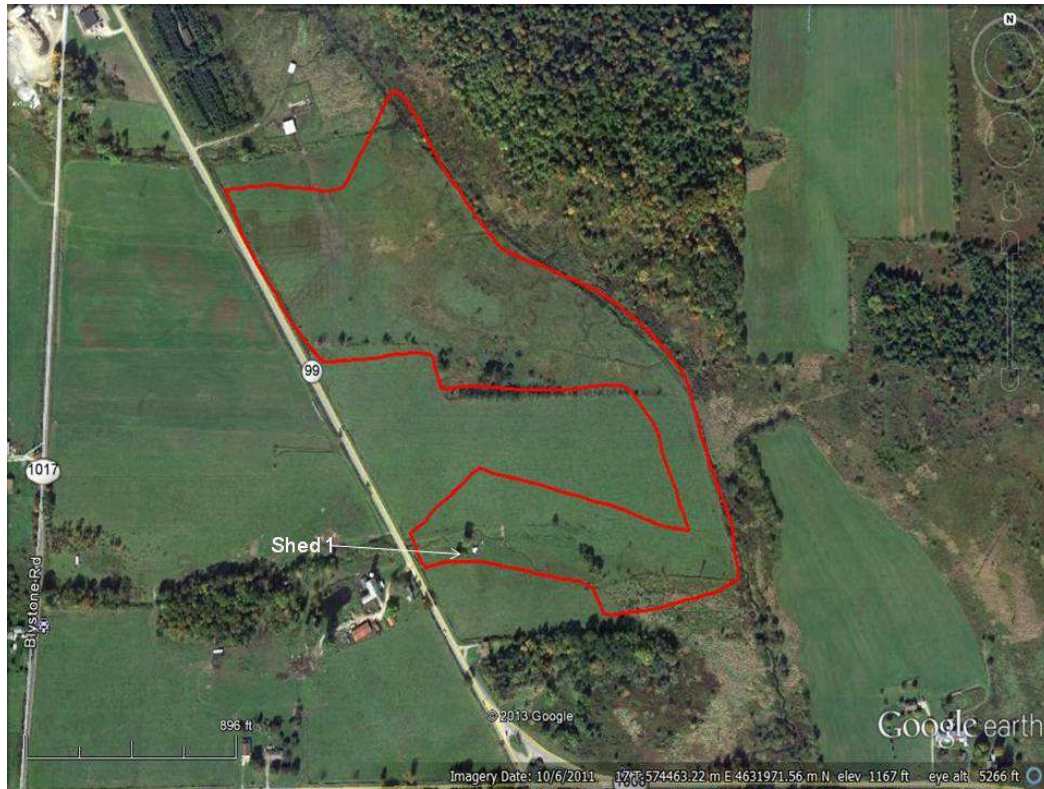


Figure 9. Map showing location of architectural resources.



Figure 10. View of Shed 1 façade facing east.



The pedestrian walkover did not locate any archaeological resources or surface deposits of artifacts within the Site. The Site is the ending slope margin for an upland that is located just to the west of the Site. The slopes are fairly gentle with a sharp drop off roughly halfway across the field at the 1,170 feet AMSL where the topography broadens out into a broad floodplain (Plates 1 - 7). The locations of the photos in plates 1 through 7 are shown in the attached Archaeological Photograph Location Map. The area between the road and the drop off appear to have been historically flatter, larger, and although removed from the actual stream channel, would have been adjacent to lowland marshes and wetlands. This upland and lowland margin could have moderate potential for the location of Native American resources. These resources would probably be restricted to small, overlapping campsites used for a single episode to hunt and/or gather plants, nuts, and berries in the fertile wetlands along the stream channel. In addition, this landform would have historically had water on three sides with the two unnamed tributaries draining the uplands located on the northern and southern side of the landform and Torry Run to the east. However, within the Site, the northern section of the upland and lowland margin landform appears to now be part of a wetland around the unnamed tributary. The southern section consists of the side slope down to the stream channel. Extensive hoof shear stress was noticed along the stream where the cattle crossed accessed the stream along the northern and southern edges of the landform. The center section of the landform has the higher potential to contain intact archaeological resources.

In sum, the Site consists of a level, landform that is slightly elevated above what historically would have been wetlands or marsh along Torry Run. The shed identified within the Site is modern and is not considered potentially eligible for listing on the National Register of Historic Places. There should also be no effect to any viewsheds as the project is limited to restoration. The low areas along the creek are poorly-drained soils that would have historically been wetlands or marsh. Circa~ recommends no further work as the project is currently designed. Circa~ recommends that a Phase I survey be completed of the central upland margin if the project changes and construction activities impact that area.



Plate. 1. View of Site along the north edge of the upland looking southeast. Note how area is churned from the extensive cattle traffic.



Plate 2. View of Site looking southeast.





Plate 3. View of Site looking southeast.



Plate 4. View of unnamed tributary and Site on the southern edge of the upland looking east.



Plate 5. View of Site looking east.



Plate 6. View of Site low floodplain looking southeast.

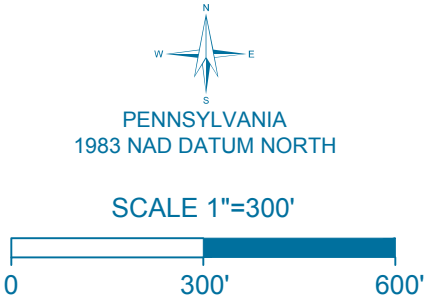
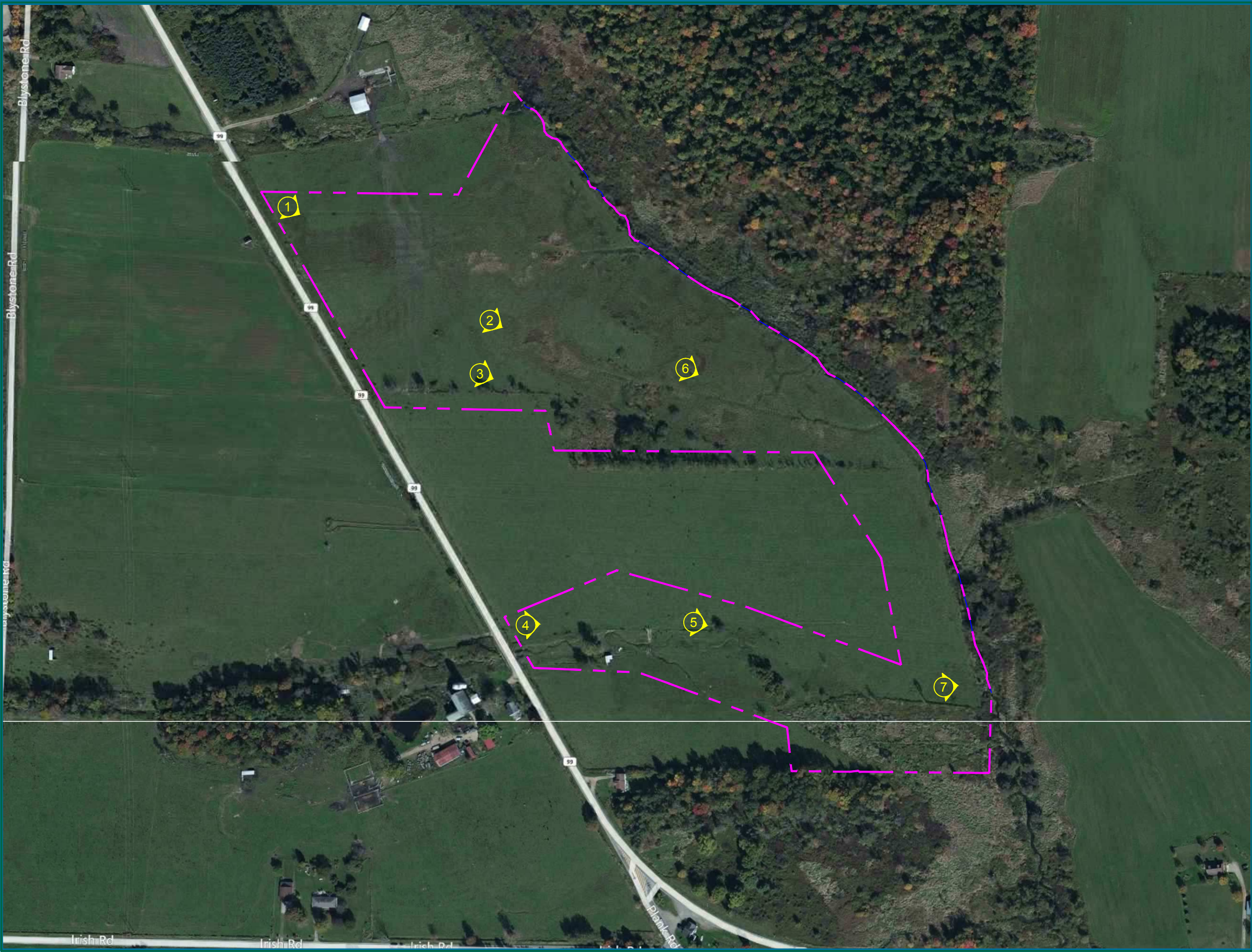




Plate 7. View of Torry Run looking east.



Y:\804\33771-RES\_Conneauttee\_Cr\_M.BIDWG\Sheet\Exhibit\CR33771-Conneauttee Creek MB Archaeological Photo Map.dwg | Plotted on 4/12/2013 8:44 AM | by Steve Vargo



CONNEAUTTEE CREEK  
MITIGATION BANK

ARCHAEOLOGICAL  
PHOTOGRAPH LOCATION  
MAP

CRAWFORD COUNTY,  
PENNSYLVANIA

LEGEND

- CONNEAUTTEE CREEK  
MITIGATION BANK LIMITS  
(40.6 ACRES+/-)
- ⓧ PHOTOSTATION

NOTES:

1. PROJECT STUDY LIMITS ARE APPROXIMATE.
2. AERIAL IMAGERY FROM ESRI ONLINE-2012.



**EXHIBIT 4C**

**REPRESENTATIVE SITE PHOTOS AND LOCATION MAP**



Photo 1 - Unnamed tributary of Torry Run lacks a forested buffer as it flows through pasture on the proposed Site. (1/21/13)



Photo 2 – Unnamed tributary lacks stream bank stabilizing vegetation. (1/21/13)





Photo 3 – Cattle crossing guard that has failed and redirected flow to form a new channel in an adjacent field. (1/21/13)



Photo 4 – Unnamed tributary in its existing condition has limited habitat for aquatic species. (1/21/13)



Photo 5 – Banks along unnamed tributary are actively eroding and sloughing. (1/21/13)



Photo 6 – Riparian zone of unnamed tributary and PEM are currently used as pastures for the production of livestock. (1/21/13)





Photo 7 – Flooding of the unnamed tributary provides hydrology to the adjacent degraded PEM wetland.  
(1/21/13)



Photo 8 – Rack lines present in a degraded PEM wetland system. (1/21/13)





Photo 9 – Hydrology from historical channel joins current channel forming a pool at a livestock crossing.  
(1/21/13)



Photo 10 – Direct access to the unnamed tributary from cattle has caused degradation of the resource.  
(1/21/13)





Photo 11 – Tributary enters a scrub/shrub community where livestock is currently excluded.  
(1/21/13)



Photo 12 – Various shrubs and reed canary grass dominate the riparian community. (1/21/13)



Photo 13 – Various shrubs and reed canary grass dominate the riparian community.  
(1/21/13)



Photo 14 – PEM wetland and riparian buffer of Torry Run. (1/21/13)





Photo 15 – Drainage feature from PEM wetlands to Torry Run within pastured field. (1/21/13)



Photo 16 – PEM wetlands to be restored to PFO wetlands. (1/21/13)



Photo 17 - Riparian buffer of Torry Run lacks a sufficient tree and shrub layer to filter nutrients from adjacent uplands. (1/21/13)



Photo 18 – Beaver dam on Torry Run. (1/21/13)





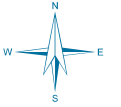
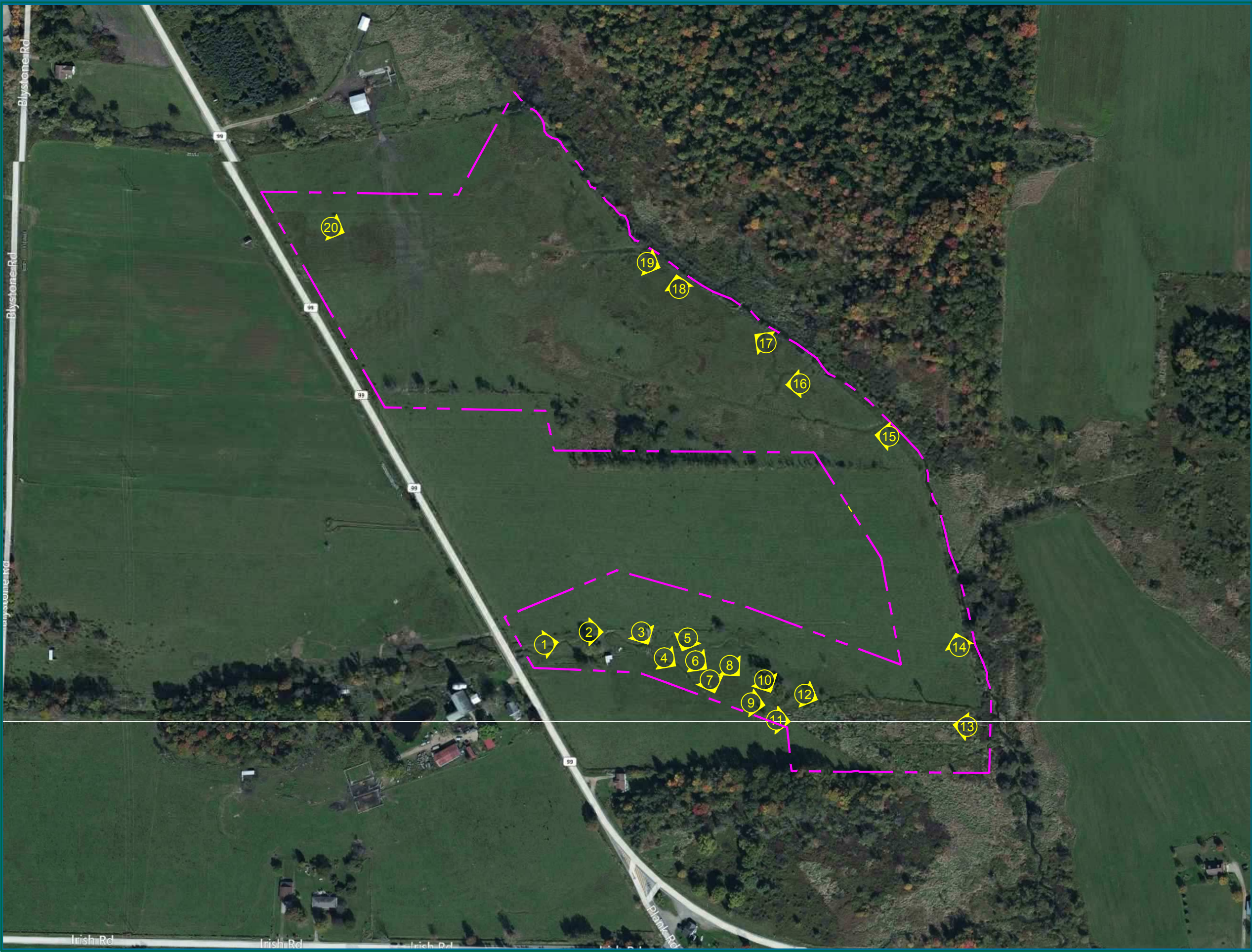
Photo 19 – Torry run is currently grazed by livestock to the edge of the stream bank.  
(1/21/13)



Photo 20 – Uplands and PEM wetlands that will be restored to a forest community.  
(1/21/13)



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PENNSYLVANIA  
1983 NAD DATUM NORTH

SCALE 1"=300'



CONNEAUTTEE CREEK  
MITIGATION BANK

PHOTOGRAPH LOCATION  
MAP

CRAWFORD COUNTY,  
PENNSYLVANIA

#### LEGEND

- CONNEAUTTEE CREEK  
MITIGATION BANK LIMITS  
(40.6 ACRES+/-)
-  PHOTOSTATION

#### NOTES:

1. PROJECT STUDY LIMITS ARE APPROXIMATE.
2. AERIAL IMAGERY FROM ESRI ONLINE-2012.



**EXHIBIT 4D**

**SITE MAPS**



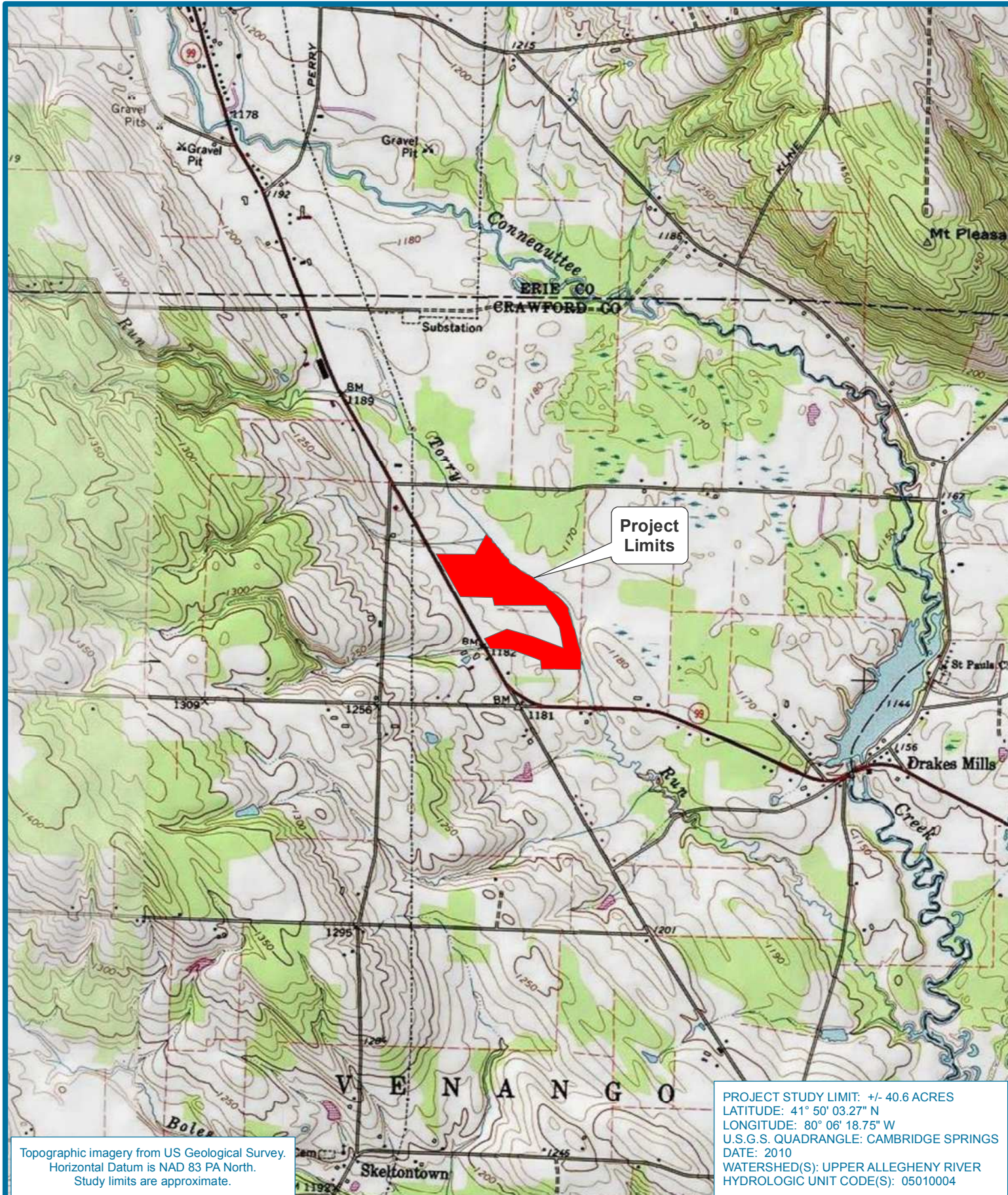
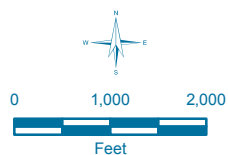


FIGURE 4D-1

CONNEAUTTEE CREEK MITIGATION BANK

VICINITY MAP

CRAWFORD COUNTY, PENNSYLVANIA



J/N: 33771  
Date: 04/03/13  
Revised: -----





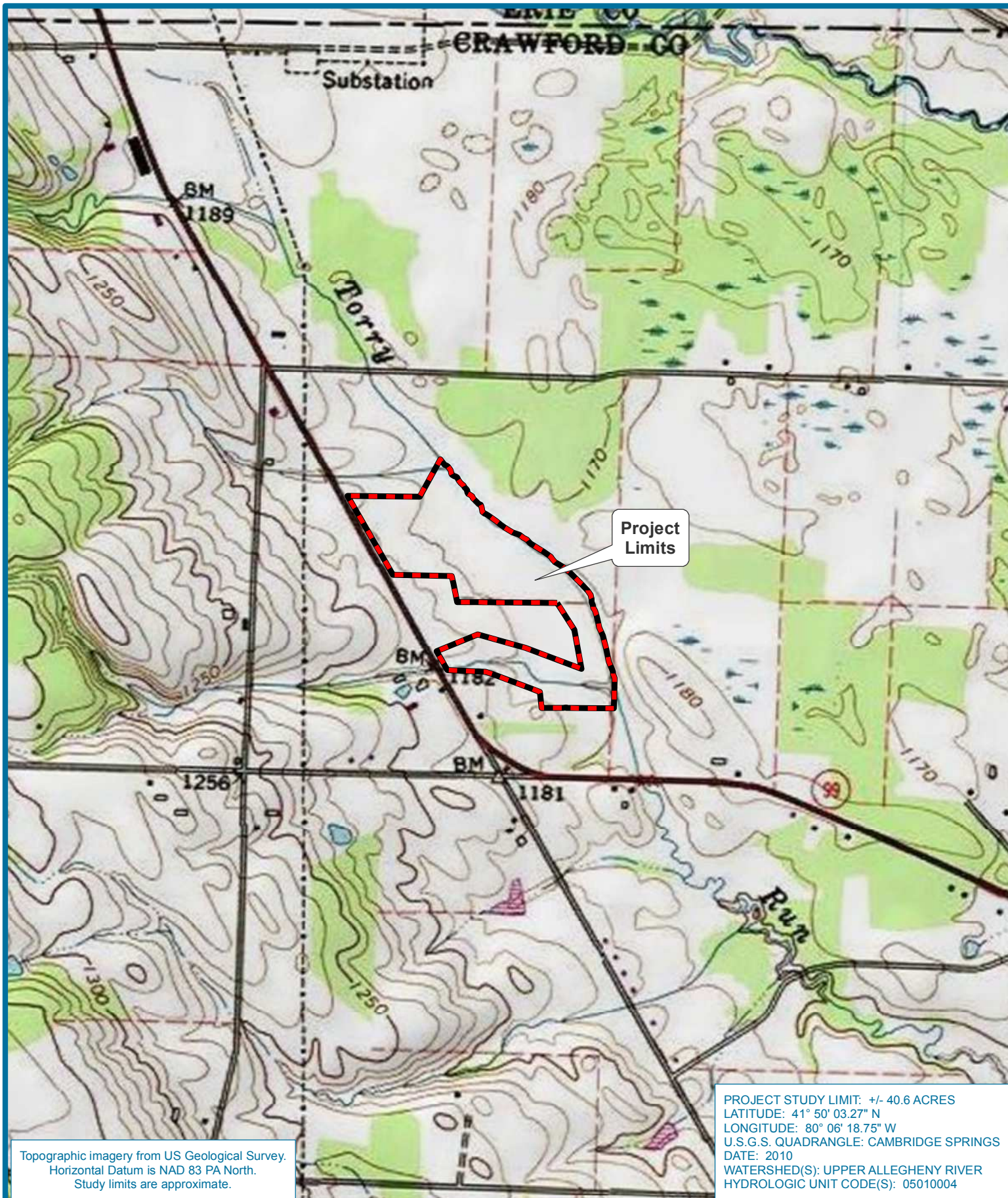


FIGURE 4D-2

CONNEAUTTEE CREEK MITIGATION BANK

SITE LOCATION MAP

CRAWFORD COUNTY, PENNSYLVANIA

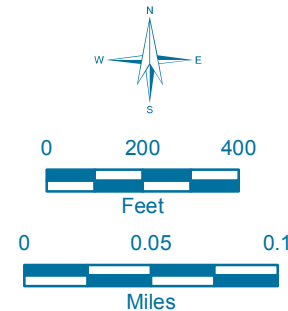
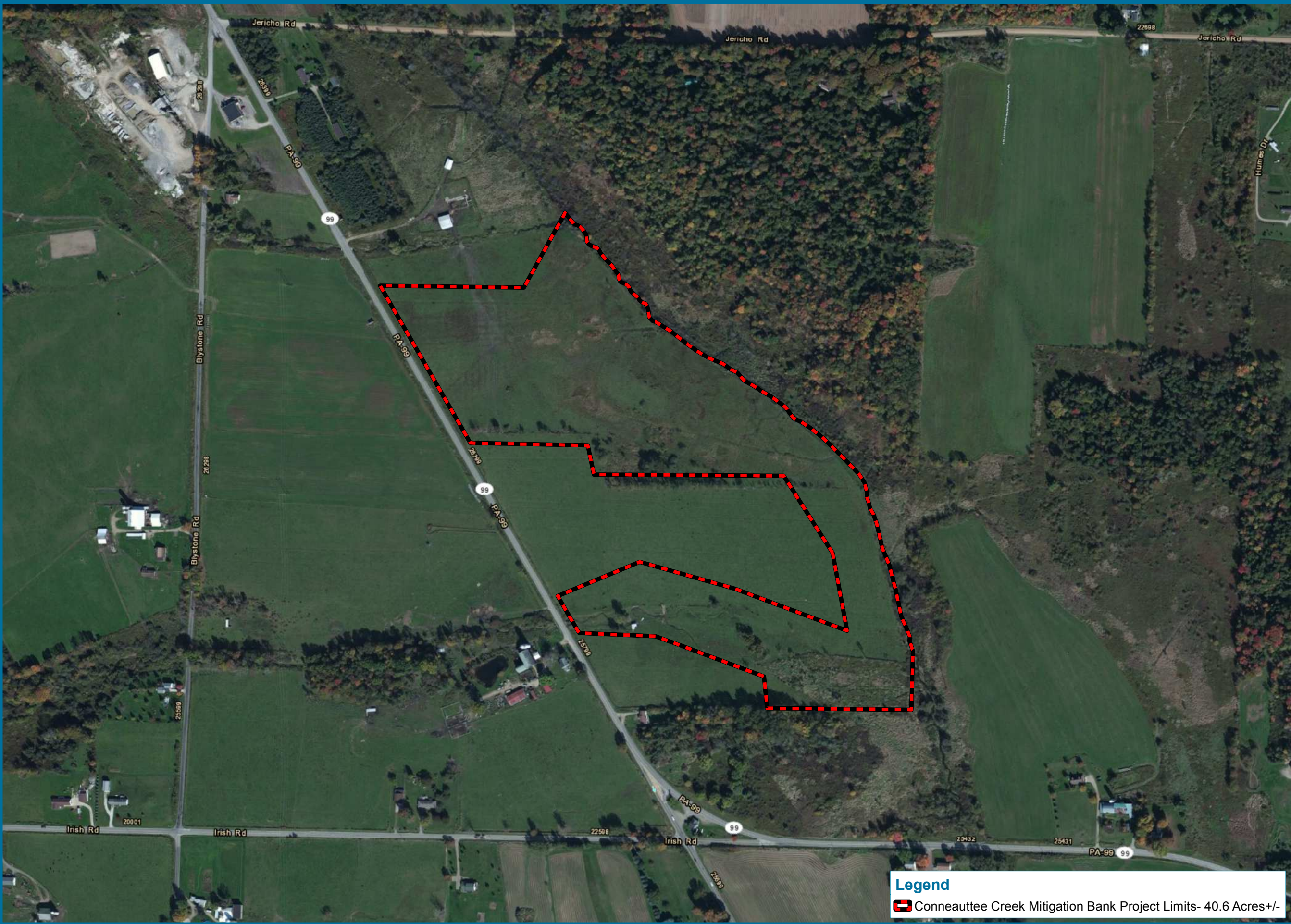


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Revised: \_\_\_\_\_

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**FIGURE 4D-3**  
**CONNEAUTTEE CREEK**  
**MITIGATION BANK**  
  
**PROJECT LIMITS**  
**AERIAL MAP**  
  
**CRAWFORD COUNTY,**  
**PENNSYLVANIA**

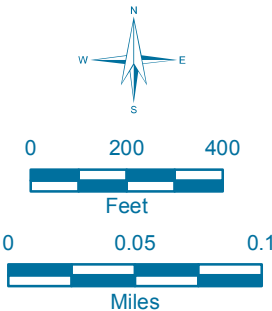
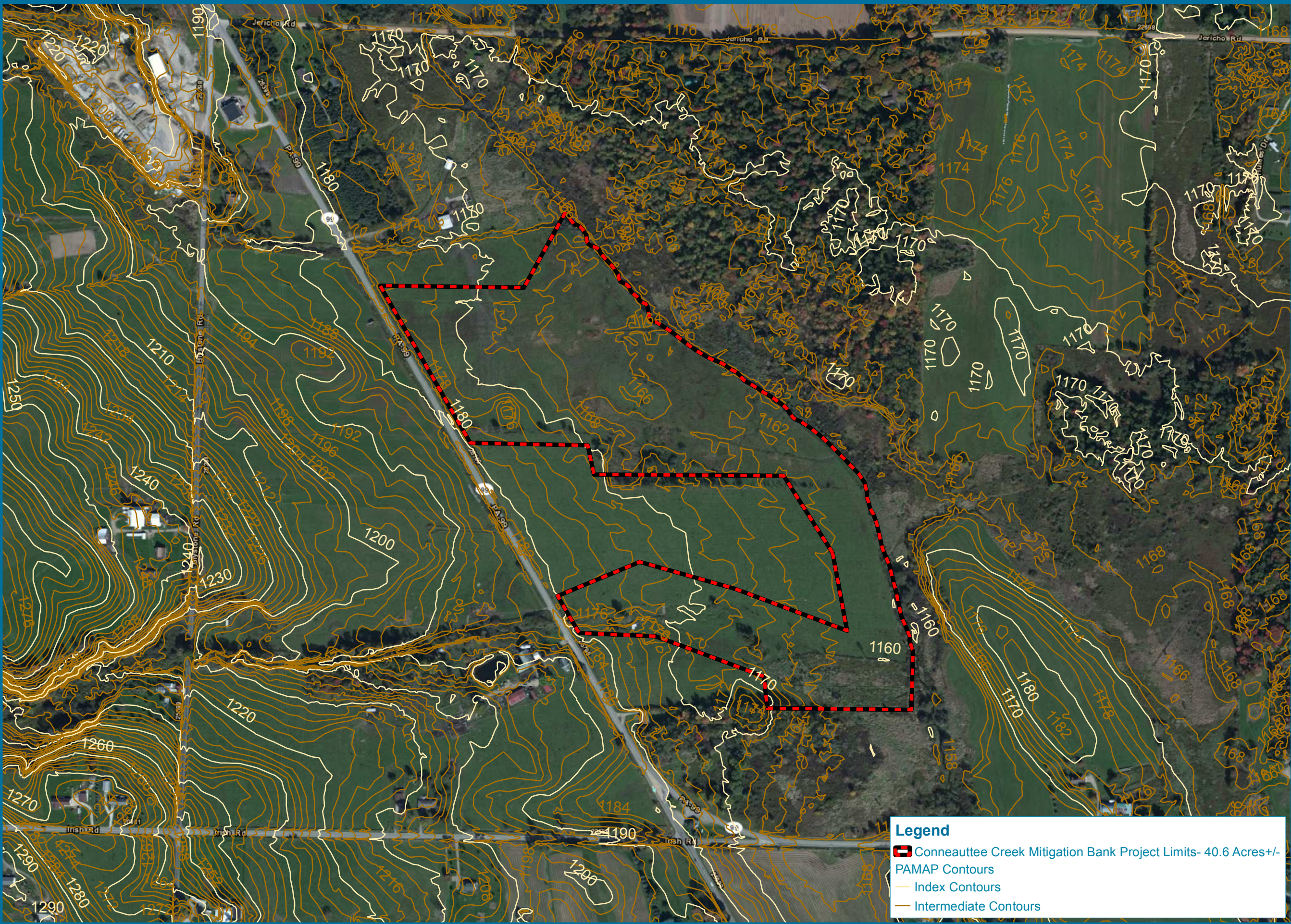
J/N: 33771  
Date: 04/03/13  
Revised: -----

**REFERENCE**

- 1) Aerial imagery from ESRI Online-2012.
- 2) Site limits are approximate.

**Legend**  
[Red dashed line symbol] Conneauttee Creek Mitigation Bank Project Limits- 40.6 Acres+/-





**FIGURE 4D-4**

**CONNEAUTTEE CREEK  
MITIGATION BANK**

**TOPOGRAPHIC MAP**





**CRAWFORD COUNTY,  
PENNSYLVANIA**

J/N: 33771  
Date: 04/04/13  
Revised: -----

**REFERENCE**

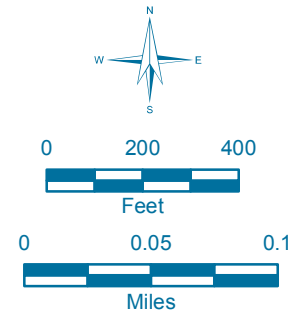
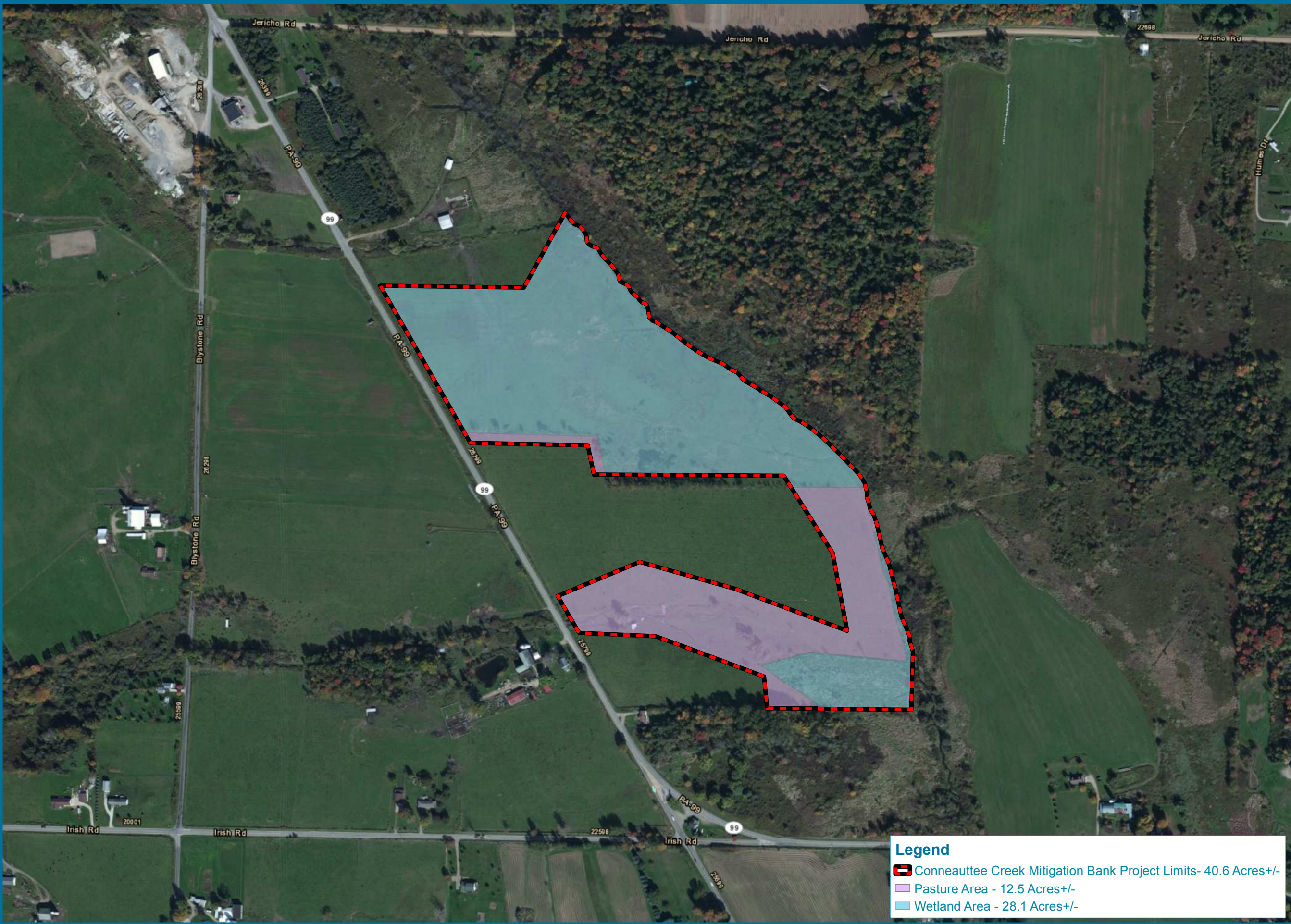
- 1) Aerial imagery from ESRI Online-2012.
- 2) Site limits are approximate.
- 3) LIDAR Contours from PAMAP Program,  
PA Dept. of Conservation & Natural Resources.

**Legend**

-  Conneauttee Creek Mitigation Bank Project Limits- 40.6 Acres+/-
-  PAMAP Contours
-  Index Contours
-  Intermediate Contours



Document Path: Y:\804\33771-RES\_16CRA073\_Torjor\GIS\PHMC Maps\Figure 5- Conneauttee Creek Existing Land Cover Map.mxd



**FIGURE 4D-5**

**CONNEAUTTEE CREEK  
MITIGATION BANK**

**EXISTING LAND COVER MAP**




**CRAWFORD COUNTY,  
PENNSYLVANIA**

J/N: 33771  
Date: 04/04/13  
Revised: -----

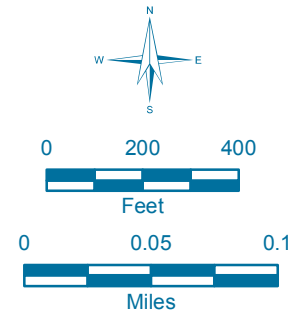
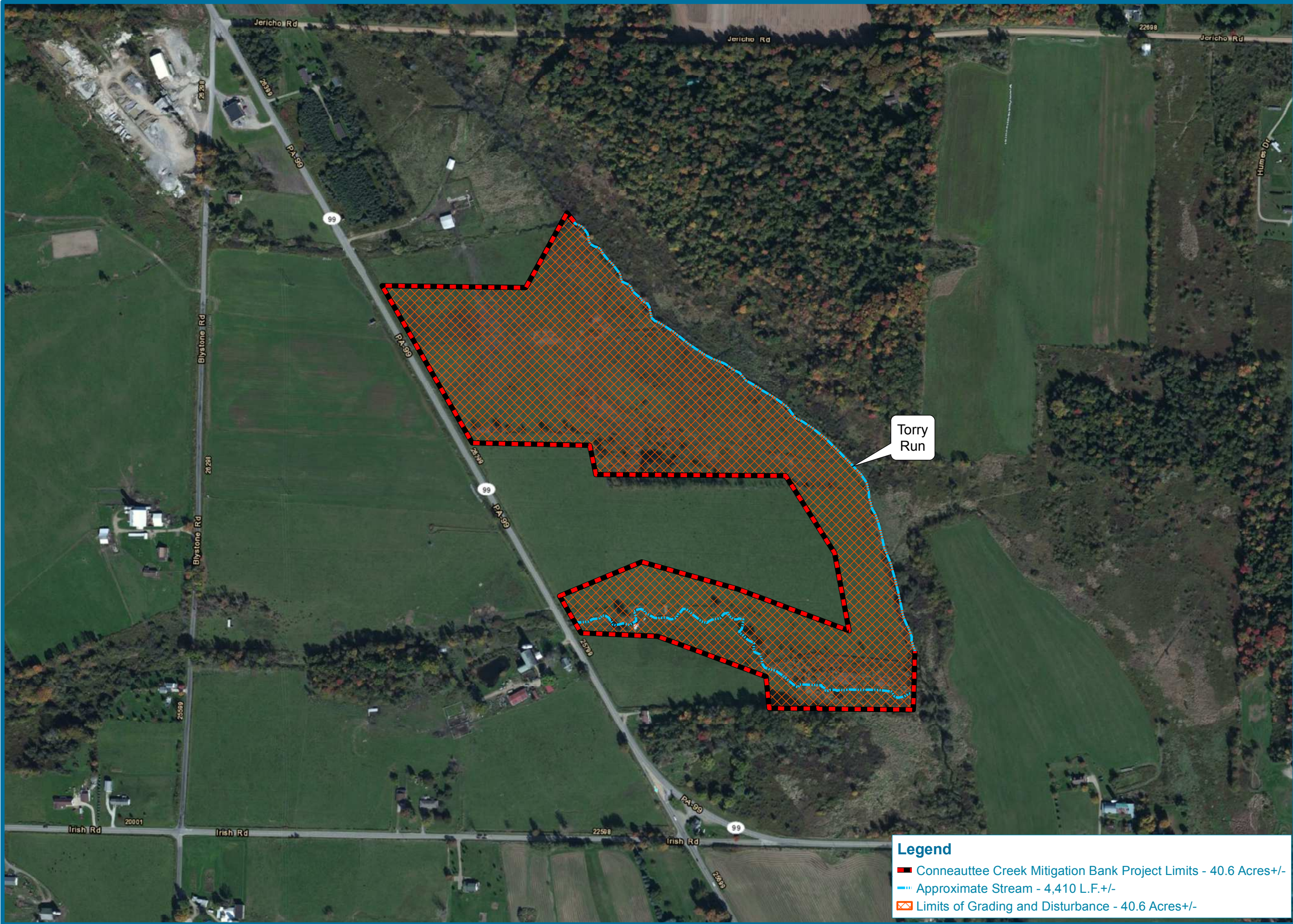
**REFERENCE**

- 1) Aerial imagery from ESRI Online-2012.
- 2) Site limits are approximate.

**Legend**

-  Conneauttee Creek Mitigation Bank Project Limits- 40.6 Acres+/-
-  Pasture Area - 12.5 Acres+/-
-  Wetland Area - 28.1 Acres+/-





**FIGURE 4D-6**  
**CONNEAUTTEE CREEK**  
**MITIGATION BANK**  
  
**PROJECT GRADING**  
**AND DISTURBANCE MAP**  
  
**CRAWFORD COUNTY,**  
**PENNSYLVANIA**

J/N: 33771  
Date: 04/04/13  
Revised: -----

**REFERENCE**

- 1) Aerial imagery from ESRI Online-2012.
- 2) Site limits are approximate.

**Legend**

- Conneauttee Creek Mitigation Bank Project Limits - 40.6 Acres+/-
- Approximate Stream - 4,410 L.F.+/-
- Limits of Grading and Disturbance - 40.6 Acres+/-



**EXHIBIT 5**  
**MITIGATION WORK PLAN**



# **CONNEAUTTEE CREEK MITIGATION BANK MITIGATION WORK PLAN**

## **I. Site Introduction**

### **A. Project Description**

This Mitigation Work Plan is for the construction of the Conneauttee Creek Mitigation Bank (CCMB). The CCMB is in Cambridge Springs, Crawford County, approximately 3 miles Southeast of Edinboro, Pennsylvania (Figure 1). The CCMB will include the restoration and conservation of all stream channels onsite and the restoration and conservation of their associated riparian zone. The CCMB will also include the rehabilitation and enhancement of all wetlands onsite, as well as the reestablishment of historical wetland areas within the CCMB. Additionally, all upland habitat onsite will be restored to a forested state and conserved. The 40.6 +/- acre site will be entered in a perpetual conservation easement by the Sponsor and landowner.

The CCMB address is:

25797 State Highway 99  
Cambridge Springs, PA 16403

The CCMB latitude and longitude coordinates are:

410° 50' 03.27" North  
800° 06' 18.75" West

The Mitigation Bank Sponsor is:

First Pennsylvania Resource, LLC  
380 Southpointe Blvd., Suite 405  
Canonsburg, PA 15317  
ATTN: Will Donaldson  
Email: [Will@res.us](mailto:Will@res.us)  
Phone: (504) 493-6148

## **II. Site Data**

### **A. Soils**

According to the US Department of Agriculture Natural Resources Conservation Service (NRCS), at least five different soil types and soil type variants exist within the CCMB (Figure 9). The association of soils found on the site consists primarily of Holly silty clay loam 0-3% slopes (58%), Holly silt loam 0-3 % slopes (15%), Red Hook loam 0-5% slopes (14%), Chenango gravelly silt loam 0-3% slopes (7%), and Halsey silt loam 0-3% slopes (6%). All soils found onsite are classified as hydric by the NRCS.

### **B. Vegetation**

The CCMB was cleared prior to 1956 and has been in agricultural use since that time (Figure 11 and Figure 12). Historical research depicts how the site once existed as a rich bottomland hardwood and scrub-shrub wetland habitat prior to the

conversion to open field habitat utilized for agricultural purposes. The current emergent vegetation within these wetlands represents a cover state which is actively altered preventing succession to a forested system.

The Palustrine Emergent Wetlands (PEM), Palustrine Scrub-Shrub Wetlands (PSS), and upland areas onsite all contain actively grazed pasture grasses including fescue (*Festuca pratensis*). Aside from the pasture grasses, dominant vegetation found within the PEM wetland areas includes soft rush (*Juncus effuses*), arrow leaved tearthumb (*Polygonum sagittatum*), marshpepper knotweed (*Polygonum hydropiper*), and a variety of wetland sedges.

The PSS wetland area is dominated by Pussy Willow (*Salix discolor*) in the shrub stratum and Reed canary grass (*Phalaris arundinacea*) in the herbaceous stratum.

### **C. Hydrology**

The majority of the CMMB's hydrology originates as headwaters offsite and ground water discharge within the CCMB. Hydrology within the existing wetlands is derived from groundwater along the stream floodplain and additional areas onsite that have a high groundwater table. Both Torry Run and the unnamed tributary to Torry Run originate offsite.

## **III. Wetland Restoration Plan**

### **A. Wetland Restoration Actions**

Restoration actions proposed for wetlands onsite include restoration of currently degraded PEM and PSS wetlands to PFO and PSS wetlands and the management of invasive non-native species (Figure 5). The majority of the wetlands onsite are actively grazed and degraded PEM wetlands that lack tree and shrub canopy cover. The restoration approach to these wetland systems will exclude livestock through fencing and re-establish native vegetation communities of PFO wetlands. The degraded PSS wetlands located within the southeast portion of the CCMB will be enhanced by conserving the existing native scrub-shrub cover and the removal of invasive non-native vegetation. This area will then be replanted with additional native shrubs and a native wetland herbaceous seed mix in invasive treatment areas.

### **B. Planting**

#### **1. Species Composition**

Bottomland hardwood habitats will be restored on agricultural lands in the mitigation area by selecting the species represented within the reference site flora. The plants within Table 1 will be applied to all wetland areas including existing PEM and PSS areas and the upland areas to be converted to wetlands.

Indicator Categories range from Facultative (FAC) to Obligate (OBL) depending on site hydrology. Depending on availability, species to be planted will typically consist of some combination of the plants found in Table 1 with no single species comprising more than 25 percent of the plantings.



Table 1: Wetland Forest Plant List

Zone	Botanical Name	Common Name	Indicator Status
Wetland Forest	<i>Quercus bicolor</i>	swamp white oak	FACW
	<i>Quercus phellos</i>	pin oak	FACW
	<i>Acer rubrum</i>	red maple	FAC
	<i>Cornus sericea</i>	red-osier dogwood	FACW
	<i>Salix discolor</i>	pussy willow	FACW
	<i>Alnus serrulata</i>	brook-side alder	OBL
	<i>Carpinus caroliniana</i>	American hornbeam	FAC
	<i>Betula alleghaniensis</i>	yellow birch	FAC
	<i>Viburnum dentatum</i>	arrow-wood	FAC

## 2. Planting Guidelines

- 1) The site will be prepared by mechanical or chemical means, or any combination thereof, depending on site conditions.
- 2) Seedlings will be planted on a maximum of 10-foot centers for a minimum initial stand density of no less than 435 trees per acre.
- 3) Selected species will be planted as dictated by terrain and soil conditions to promote biodiversity.
- 4) After planting, the site will be maintained by use of mechanical or chemical controls or some combination thereof, if necessary.
- 5) The mitigation area will be monitored, managed, and protected, as described in the Pennsylvania Statewide Umbrella Mitigation Banking Instrument (PSUMBI) and the Mitigation Site Plan for the CCMB (MSP).

## C. Hydrologic Restoration

Multiple small drainage ditches exist onsite, directing onsite water into Torry Run. These drainage ditches will no longer be maintained. actively degrading the onsite drainage ditches, this action will help restore historical hydrology to the CCMB.

Multiple hummocks within the CCMB that were historically wetlands currently present as non-jurisdictional areas. A small amount of soil layer removal will lower the elevation of these areas, allowing for the necessary hydrology for wetland re-establish. All grading activity will adhere to the grading guidelines set out in the Chapter 105 permit for the CCMB.

## IV. Stream Restoration Plan

### A. Stream Restoration Activities

1,666 linear feet of minor in-channel rehabilitation and riparian restoration will be conducted on the unnamed tributary to Torry Run (Figure 5). Stream rehabilitation

will be undertaken utilizing Natural Channel Design (NCD) techniques to improve the overall channel condition, stabilize channel banks, and re-establish hydraulic connectivity of flood prone areas.

This unnamed tributary currently flows through a pastured field diverting from its original course because it has rerouted flow as a result of a failed agricultural crossing. Restoration actions, including the removal of obstructions and live stream bank plantings will allow for increased stream functions, including sediment transport, water conveyance and storage and also provide aquatic species habitat.

Live stakes will be installed to provide stream bank stabilization, and supplemental riparian zone plantings will be established. Typical cross-sections for the restoration of the unnamed tributary to Torry Run are included as Attachment A.

2,516 +/- linear feet of channel enhancement with riparian restoration will be conducted on Torry Run (Figure 5). The enhancement measures within Torry Run will focus on invasive species elimination and riparian reforestation. The enhancement measures along the onsite side of the stream will include long-term vegetative stabilization through stream bank live staking and native woody species plantings. Supplemental riparian zone plantings will further enhance the stream health of Torry Run.

### **B. Riparian Zone Restoration and Conservation**

Riparian zone restoration along both sides of the unnamed tributary onsite and along the right side of Torry Run will be conducted to restore native scrub-shrub and forested cover. Currently, the riparian zone in most areas onsite consists of actively grazed pasture lacking both tree and shrub coverage (Figure 8). Heavy native woody stem plantings are proposed to improve the stream and wetland health by filtering runoff, absorbing nutrients, and providing habitat for both aquatic and terrestrial wildlife species.

Invasive non-native species will be managed as described in Section V to allow for the restoration of native coverage species.

## **V. Invasive Species Management**

Existing invasive/undesirable species will be removed from the site through mechanical clearing and herbicide application prior to planting of the CCMB. The planting of appropriate PFO habitat species and the removal of the stress from livestock grazing should allow the native hydrophytic vegetation to outcompete the non-native species currently dominating the CCMB.

Invasive and undesirable species control will be conducted throughout the entire site area over the life of the CCMB. The CCMB will be continuously monitored and maintained as described in the MSP and the PSUMBI, with the Sponsor or long-term steward providing yearly assessments of invasive species and coordinating invasive species management activities with the appropriate regulatory agencies as described in the MSP and the PSUMBI.



## **VI. Further Design Details**

Complete engineering plans may be required for the CCMB restoration efforts. Should engineering plans be required, the Sponsor shall submit final engineering plans for the final comment stage. Supplemental information on the CCMB establishment and management process can found in the PSUMBI and the MSP. Any requests for information on the Mitigation Work Plan for the CCMB may be directed to the Sponsor as described in Section I. A.

## **VII. Joint Permit Application**

RES is preparing and finalizing applications for all necessary permits associated with the CCMB. The Sponsor will obtain all appropriate permits or other authorizations needed to construct and maintain the CCMB prior to Debiting any Credits beyond the initial release. Permit applications for the CCMB must conform to and reflect the requirements for each Bank Site set forth in the PSUMBI, Section I.E. RES will include all associated permits with the CCMB Mitigation Site Plan as exhibits during the final comment phase of Public Notice.

**EXHIBIT 6**  
**BANK LEDGER**



## Bank Ledger

	Date	Permitee	Permit Number (PADEP)	Permit Number (USACE)	Subbasin	Project Credits Utilized	Released Credits Remaining	Credits Released	Expected Future Credits Released	Permit impacts (Credits)	Released Credits Remaining
<b>Functional Ratio Method</b>											
Perrenial Stream					16	0	0	0	2,672.4	0	0
Forested Wetland					16	0	0	0	30.2	0	0
Scrub-Shrub Wetland					16	0	0	0	1.08	0	0

**EXHIBIT 7**

**REVISED SITE PROTECTION INSTRUMENT**



## **DECLARATION OF RESTRICTIVE COVENANT FOR CONSERVATION**

This DECLARATION OF RESTRICTIVE COVENANTS FOR CONSERVATION relates to an ecological enhancement and restoration project (hereinafter, this "Declaration") is made and entered into as of \_\_\_\_\_, 2013 by Hans O. Torbjornsen with a business address at 22225 Hecker Road, Cambridge Springs, PA 16403 ("Grantor").

### **RECITALS**

WHEREAS, Grantor owns in fee simple certain real estate located in Crawford County liber and folio reference \_\_\_\_\_ consisting of \_\_\_\_\_ acres, more or less, as described more specifically in Exhibit A hereto (the "Property"); and

WHEREAS, the Grantor has agreed to make a 40.6 acre portion of the Property, delineated in Exhibit A attached hereto, where certain aquatic resources exist or may be created and/or enhanced (the "Conservation Area"), subject to this Declaration whose legal description is attached hereto as Exhibit A; and

WHEREAS, First Pennsylvania Resource ("FPR") entered into the Pennsylvania Statewide Umbrella Mitigation Banking Instrument (the "PSUMBI") between: FPR (the "Sponsor") and the Interagency Review Team (the "IRT") which consists of [the U.S. Army Corps of Engineers ("USACE" or "Corps") Baltimore, Philadelphia, and Pittsburgh Districts, the U.S. Environmental Protection Agency ("EPA"), the U.S. Fish and Wildlife Service ("FWS"), the U.S.D.A. Natural Resources Conservation Service ("NRCS"), the NOAA-National Marine Fisheries Service "NMFS"), the Pennsylvania Department of Environmental Protection ("PADEP"), the Pennsylvania Game Commission ("PGC"), the Pennsylvania Historical commission ("PHMC"), and the Pennsylvania Fish and Boat Commission ("PFBC"); and

WHEREAS, the Grantor agrees to the creation of the Conservation Area described herein and intends that the Conservation Area shall be preserved and maintained in perpetuity in an enhanced and/or natural condition, which condition will include functioning wetlands; and

WHEREAS, the Grantor(s) desire(s) to comply with the conditions of the PSUMBI by imposing this Site Protection Instrument on a Conservation Area within the Property; and

WHEREAS, under Federal and State law, the Corps has issued Permit No. \_\_\_\_\_ and the PADEP has issued Permit No. \_\_\_\_\_ (collectively, the "Permits") for impacts to waters of the United States and/or the Commonwealth of Pennsylvania expected to result from the creation of the self-sustaining natural aquatic system located on the Conservation Area; and

WHEREAS, the Grantor agrees and acknowledges that this Declaration, including the rights authorized to Grantor herein, shall be assignable and transferrable to Grantor's subsequent heirs, successors, and assigns.

NOW, THEREFORE, for good and valuable consideration and in consideration of the mutually held interests in enhancement and preservation of the environment, as well as the terms, conditions, and restrictions contained herein, and pursuant to the laws of the Commonwealth of Pennsylvania, Grantor does agree to the following terms and conditions:

A. PURPOSE

The purpose of this Declaration is:

- (1) To preserve, protect, and enhance the native flora, fauna, soils, water table, aquifer, drainage patterns, wetland resources and other related environmental functions and values of the Conservation Area;
- (2) To maintain the natural view shed of the Conservation Area in its native, enhanced, scenic and open condition;
- (3) To assure that the Conservation Area, including its air space, streams and other aquatic resources on or beneath the Conservation Area, and including, but not limited to, subsurface aquifers, springs, and the water table, will be maintained in perpetuity in its natural condition, as that may be enhanced, as provided herein; and
- (4) To prevent any use of the Conservation Area that threatens to or will impair, interfere with, or otherwise negatively affect its natural resource functions and values.

Grantor intends and agrees that this Declaration will confine the use of the Conservation Area to such activities as are consistent with the purposes set forth herein.

B. ACCESS

In order to achieve the purposes of this Declaration, the following rights are created in accordance with Pennsylvania law [for government entities, use PA Statutes, Title 32, §§ 5051-5059.]:

- (1) The Grantor shall have the right and acknowledges the right of the Sponsor, the Corps, the PADEP and other government agencies to enter upon the Property to inspect the Conservation Area at reasonable times to monitor compliance with this Declaration. Except in cases of a threat of a physical or public safety emergency, such entry shall, when practicable, be upon reasonable prior notice to Grantor or its successors and assigns, and such entry shall not unreasonably interfere with the Grantor's or its successors' and assigns' use and quiet enjoyment of the Property.
- (2) The Grantor shall each have the right to enter upon the Property to access the Conservation Area at reasonable times, upon prior notice to the property owner; and upon notice and written approval by the USACE may take appropriate environmental or conservation management measures within the Conservation Area consistent with the terms and purposes of this Declaration, including, but not limited to:



- (a) planting of native vegetation (i.e. trees, shrubs, grasses, and forbs); and
- (b) restoring, altering or maintaining the topography, hydrology, drainage, structural integrity, streambed(s), streambank(s), water quantity, water quality, any relevant feature of a stream, wetland, water body, or vegetative buffer within the Conservation Area.

(3) The Grantor, the Sponsor, the Corps and other government agencies with appropriate legal authority shall each have the right to enforce the terms of this Declaration by appropriate legal proceedings [for government entities, use PA Statutes, Title 32, §§ 5051-5059.] in accordance with applicable law so as to prevent any activity on or use of the Property that is inconsistent with the purposes of this Declaration and to require the restoration of such areas or features of the Conservation Area that may be impaired or damaged by an inconsistent activity or use.

#### C. DURATION

This Declaration shall remain in effect in perpetuity, shall run with the land regardless of ownership or use, and is binding upon and shall inure to the benefit of the Grantor's heirs, executors, administrators, successors, representatives, devisees, and assigns, as the case may be, as long as said party shall have any interest in any portion(s) of the Conservation Area.

#### D. PERMITTED USES

This Declaration will not prevent the Grantor, or any subsequent owner of the Property and/or portions of the Property, from making use of the area(s) outside of the Conservation Area or from uses that are consistent with the purposes of this Declaration.

#### E. RESTRICTIONS

Any activity in or use of the Conservation Area that is inconsistent with the purposes of this Declaration by the Grantor; subsequent property owner(s); and the personal representatives, heirs, successors, and assigns of either the Grantor or subsequent property owner(s), is prohibited. Without limiting the generality of the foregoing, and except when an approved purpose under B.(2) above, or as necessary to accomplish mitigation approved under the any permit(s) reliant upon this Declaration, the following activities and uses are expressly prohibited in, on, over, or under the Conservation Area, subject to the express terms and conditions below:

(1) **Structures.** The construction of man-made structures including, but not limited to, the construction, removal, placement, preservation, maintenance or alteration of any buildings, roads, utility lines, billboards, or other advertising. This restriction does not include deer stands, bat boxes, bird nesting boxes, bird feeders, duck blinds, and the placement of signs for safety purposes or boundary demarcation.

(2) **Demolition.** The demolition of fencing structures constructed by the Sponsor for the purpose of demarcation of the Conservation Area or for public safety.

(3) **Soils.** The removal, excavation, disturbance, or dredging of soil, sand, peat, gravel, or aggregate material of any kind; or any change in the topography of the land, including any discharges of dredged or fill material, ditching, extraction, drilling, driving of piles, mining or excavation of any kind.

(4) **Drainage.** The drainage or disturbance of any aquifer, the surface water level or the water table, except for pre-existing or approved project-related stormwater discharges and any maintenance associated with those stormwater discharges. All pre-existing or approved project-related drainage/stormwater discharge features should be shown on the accompanying plat map or approved plan and attached to this Declaration as Exhibit B.

(5) **Waste or Debris.** The storage, dumping, depositing, abandoning, discharging, or releasing of any gaseous, liquid, solid, or hazardous waste substance, materials or debris of whatever nature on, in, over, or underground or into surface or ground water, except for pre-existing or approved project related stormwater discharges, and any maintenance associated with those stormwater discharges.

(6) **Non-Native Species.** The planting or introduction of non-native or invasive species.

(7) **Herbicides, Insecticides, and Pesticides.** The use of herbicides, insecticides, pesticides, or other chemicals, except for as may be necessary to control invasive species that threaten the natural character of the Conservation Area. State-approved municipal application programs necessary to protect public health and welfare are not included in this prohibition.

(8) **Removal of Vegetation.** The mowing, cutting, pruning, removal; disturbance, destruction, or collection of any trees, shrubs, or other vegetation, except for pruning, cutting or removal for:

- a) safety; or
- b) control in accordance with accepted scientific forestry management practices for diseased or dead vegetation; or
- c) control of non-native species and noxious weeds; or
- d) scientific nature study.

(9) **Agricultural Activities.** Unless currently used for agricultural or similarly related purposes, the conversion of, or expansion into, any portion of the Conservation Area for use of agricultural, horticultural, aquacultural, silvicultural, livestock production or grazing activities. This prohibition also includes conversion from one type of these activities to another (e.g. from agricultural to silvicultural).

*[NOTE: The following language should be added, as appropriate for projects in designated bog turtle counties: Corps approved management practices, including the introduction of livestock, for the purpose of maintaining bog turtle habitat, are not included in this prohibition.]*



(10) **Subdivision of Conservation Area.** Subdivision of real property within the Conservation Area into multiple parcels.

(11) **Other.** Other acts, uses, excavation, or discharges, which adversely affect fish or wildlife habitat or the preservation of lands, waterways, or other aquatic resources mentioned herein within the Conservation Area.

#### F. INSPECTION, ENFORCEMENT AND ACCESS RIGHTS

As set forth in Section B, above, the Grantor, Sponsor, Corps, PADEP, and authorized regulatory entities have the right to enter the Property to observe the Conservation Area and to take actions necessary to verify compliance with and to enforce this Declaration. When practicable, such entry shall be upon prior reasonable notice to the property owner. The grantor grants to the Corps, the U.S. Department of Justice, and/or the PADEP, a discretionary right to enforce this Declaration in a judicial action against any person(s) or other entity(ies) violating or attempting to violate these restrictive covenants. No violation of this Declaration shall result in a forfeiture or reversion of title. In any enforcement action, an enforcing agency shall be entitled to a complete restoration for any violation, as well as other judicial remedies such as civil penalties. Nothing herein shall be interpreted to limit the right of the Corps or PADEP to modify, suspend, or revoke any permit issued or authorized by the Corps or PADEP.

#### G. RECORDING AND EXECUTION BY PARTIES

Within thirty (30) calendar days of execution of this Agreement, the Grantor shall record this Declaration in the \_\_\_\_\_ County office where land records are retained. Further, if anticipated activities in the Conservation Area are agreed upon for future phases of the site, as set forth in Section I (Reserved Rights) herein, the Grantor or Sponsor must submit plans to the Corps and PADEP for review and approval prior to any work in the Conservation Area.

#### H. NOTICE OF TRANSFER OF PROPERTY INTERESTS

No transfer of the rights set forth in this Declaration, or of any other property interests pertaining to the Conservation Area or the underlying property it occupies, shall occur without sixty (60) calendar days' prior written notice to the Sponsor, Corps and PADEP.

#### I. RESERVED RIGHTS

(1) The Grantor and any holders of declarations or other property rights for the operation and maintenance of pre-existing or project-related structures or infrastructure such as roads, utilities, drainage ditches, or stormwater facilities that are present on, over, or under the Conservation Area reserve the right, within the terms and conditions of their permits, their agreements, and the law, to continue with such operation and maintenance. All pre-existing or approved project-related structures or infrastructure, if any, shall be shown on the accompanying plat map or approved plan and attached to this Declaration as Exhibit B.

(2) If an authorized project requires any related or unanticipated infrastructure modifications, utility relocation, drainage ditches, or stormwater controls within the identified Conservation Area, or if a situation requires measures to remove threat to life or property within the identified Conservation Area, said activities must be approved in writing by the Corps and PADEP subject to terms and conditions set forth in the written approval. Approval is subject to the Corps and PADEP discretion. If approved, said activities must be identified on an amended Exhibit B and must be recorded and specifically noted as an “amendment” and copies of the recorded Amended Exhibit B must be provided to the Corps and PADEP within sixty (60) days of Corps approval. Approval of said activity by the Corps is in addition to any Clean Water Act, Section 404 permit, or other authorization, which may be required in order to legally implement said activity. The Grantor and FPR accept the obligation to place any other and/or subsequent responsible party on reasonable prior notice of their need to request such Corps approval.

#### J. SEVERABILITY

If any portion of this Declaration, or the application thereof to any person or circumstance, is found to be invalid, the remainder of the provisions of this instrument, or application of such provision to persons or circumstances other than those as to which it is found to be invalid, shall not be affected thereby.

#### K. MODIFICATIONS

The restrictions contained in this Declaration are required by the Department of the Army Permit and/or Mitigation Banking Instrument and /or Mitigation Plan, a copy of which is attached hereto and incorporated by reference. There shall be no changes or alterations to the provisions in this Declaration without prior written approval from the appropriate District Commander of the Corps and PADEP. The Corps and PADEP shall be provided with a 60-day advance written notice of any legal action concerning this Declaration or of any action to extinguish, void, or modify this Declaration in whole or in part, including transfer of title to, or establishment of any other legal claims over, the Property. This Declaration is intended to survive foreclosure, bankruptcy, condemnation, or judgments affecting the Property.

#### L. MITIGATION

If the work required by a mitigation plan, including maintenance or remedial work, under the Corps permit for the project, occurs within the Conservation Area, then the Sponsor is allowed to construct and undertake the mitigation work in accordance with an authorized mitigation plan, a copy of which is attached hereto and incorporated by reference.



M. COAL RIGHTS NOTICE

The following notice is given to and accepted by Grantor for the purpose and with the intention of compliance with the requirements of the Pennsylvania Conservation and Preservation Declarations Act. Nothing herein shall imply the presence or absence of workable coal seams or the severance of coal interests from the Property.

**NOTICE:** This Declaration may impair the development of coal interests including workable coal seams or coal interests which have been severed from the Property.

**[THE REMAINDER OF THIS PAGE IS LEFT INTENTIONALLY BLANK]**

N. [CONSENT OF LENDER AND TRUSTEE

Grantor is the maker of a note dated \_\_\_\_\_ secured by a deed of trust dated \_\_\_\_\_ from the Grantor to \_\_\_\_\_ as trustees and either of whom may act, recorded in the Clerk's office in Deed Book \_\_\_\_\_ at page \_\_\_\_\_, for the benefit of Conneauttee Creek Mitigaion Bank (The "Deed of Trust."). \_\_\_\_\_, as trustees, join herein for the sole purpose of subordinating the lien, dignity and priority of the Deed of Trust to this Declaration. Conneauttee Creek Mitigation Bank joins herein for the sole purpose of consenting to the trustee's actions.]

IN WITNESS WHEREOF said GRANTOR has executed this Declaration the day and year first above written.

***[COMPANY OR GOVERNMENT  
ENTITY NAME OF GRANTOR, IF  
APPLICABLE]***

BY: \_\_\_\_\_  
***[TITLE OF OFFICER OF GRANTOR  
ENTITY, OR GRANTOR'S NAME, IF AN  
INDIVIDUAL]***



IN WITNESS WHEREOF, intending to be legally bound, the Parties have executed this Declaration the day and year first above written.

GRANTOR:

\_\_\_\_\_  
\_\_\_\_\_

By: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

WITNESS:

\_\_\_\_\_

COMMONWEALTH OF PENNSYLVANIA :  
 : SS  
COUNTY OF \_\_\_\_\_ :

On \_\_\_\_\_, before me, a Notary Public for the Commonwealth aforesaid, personally appeared \_\_\_\_\_, who acknowledged himself/herself to be the \_\_\_\_\_ known to me or satisfactorily proven to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I have set my hand and official seal.

\_\_\_\_\_  
Notary Public  
My commission expires:  
\_\_\_\_\_

[SEAL]



**EXHIBIT 7A**

**CONSERVATION EASEMENT PLAN AND LEGAL**

**DESCRIPTION**

**EXHIBIT 7B**  
**MITIGATION WORK PLAN**



# **CONNEAUTTEE CREEK MITIGATION BANK MITIGATION WORK PLAN**

## **I. Site Introduction**

### **A. Project Description**

This Mitigation Work Plan is for the construction of the Conneauttee Creek Mitigation Bank (CCMB). The CCMB is in Cambridge Springs, Crawford County, approximately 3 miles Southeast of Edinboro, Pennsylvania (Figure 1). The CCMB will include the restoration and conservation of all stream channels onsite and the restoration and conservation of their associated riparian zone. The CCMB will also include the rehabilitation and enhancement of all wetlands onsite, as well as the reestablishment of historical wetland areas within the CCMB. Additionally, all upland habitat onsite will be restored to a forested state and conserved. The 40.6 +/- acre site will be entered in a perpetual conservation easement by the Sponsor and landowner.

The CCMB address is:

25797 State Highway 99  
Cambridge Springs, PA 16403

The CCMB latitude and longitude coordinates are:

410° 50' 03.27" North  
800° 06' 18.75" West

The Mitigation Bank Sponsor is:

First Pennsylvania Resource, LLC  
380 Southpointe Blvd., Suite 405  
Canonsburg, PA 15317  
ATTN: Will Donaldson  
Email: [Will@res.us](mailto:Will@res.us)  
Phone: (504) 493-6148

## **II. Site Data**

### **A. Soils**

According to the US Department of Agriculture Natural Resources Conservation Service (NRCS), at least five different soil types and soil type variants exist within the CCMB (Figure 9). The association of soils found on the site consists primarily of Holly silty clay loam 0-3% slopes (58%), Holly silt loam 0-3 % slopes (15%), Red Hook loam 0-5% slopes (14%), Chenango gravelly silt loam 0-3% slopes (7%), and Halsey silt loam 0-3% slopes (6%). All soils found onsite are classified as hydric by the NRCS.

### **B. Vegetation**

The CCMB was cleared prior to 1956 and has been in agricultural use since that time (Figure 11 and Figure 12). Historical research depicts how the site once existed as a rich bottomland hardwood and scrub-shrub wetland habitat prior to the

conversion to open field habitat utilized for agricultural purposes. The current emergent vegetation within these wetlands represents a cover state which is actively altered preventing succession to a forested system.

The Palustrine Emergent Wetlands (PEM), Palustrine Scrub-Shrub Wetlands (PSS), and upland areas onsite all contain actively grazed pasture grasses including fescue (*Festuca pratensis*). Aside from the pasture grasses, dominant vegetation found within the PEM wetland areas includes soft rush (*Juncus effuses*), arrow leaved tearthumb (*Polygonum sagittatum*), marshpepper knotweed (*Polygonum hydropiper*), and a variety of wetland sedges.

The PSS wetland area is dominated by Pussy Willow (*Salix discolor*) in the shrub stratum and Reed canary grass (*Phalaris arundinacea*) in the herbaceous stratum.

### **C. Hydrology**

The majority of the CMMB's hydrology originates as headwaters offsite and ground water discharge within the CCMB. Hydrology within the existing wetlands is derived from groundwater along the stream floodplain and additional areas onsite that have a high groundwater table. Both Torry Run and the unnamed tributary to Torry Run originate offsite.

## **III. Wetland Restoration Plan**

### **A. Wetland Restoration Actions**

Restoration actions proposed for wetlands onsite include restoration of currently degraded PEM and PSS wetlands to PFO and PSS wetlands and the management of invasive non-native species (Figure 5). The majority of the wetlands onsite are actively grazed and degraded PEM wetlands that lack tree and shrub canopy cover. The restoration approach to these wetland systems will exclude livestock through fencing and re-establish native vegetation communities of PFO wetlands. The degraded PSS wetlands located within the southeast portion of the CCMB will be enhanced by conserving the existing native scrub-shrub cover and the removal of invasive non-native vegetation. This area will then be replanted with additional native shrubs and a native wetland herbaceous seed mix in invasive treatment areas.

### **B. Planting**

#### **1. Species Composition**

Bottomland hardwood habitats will be restored on agricultural lands in the mitigation area by selecting the species represented within the reference site flora. The plants within Table 1 will be applied to all wetland areas including existing PEM and PSS areas and the upland areas to be converted to wetlands.

Indicator Categories range from Facultative (FAC) to Obligate (OBL) depending on site hydrology. Depending on availability, species to be planted will typically consist of some combination of the plants found in Table 1 with no single species comprising more than 25 percent of the plantings.



Table 1: Wetland Forest Plant List

Zone	Botanical Name	Common Name	Indicator Status
Wetland Forest	<i>Quercus bicolor</i>	swamp white oak	FACW
	<i>Quercus phellos</i>	pin oak	FACW
	<i>Acer rubrum</i>	red maple	FAC
	<i>Cornus sericea</i>	red-osier dogwood	FACW
	<i>Salix discolor</i>	pussy willow	FACW
	<i>Alnus serrulata</i>	brook-side alder	OBL
	<i>Carpinus caroliniana</i>	American hornbeam	FAC
	<i>Betula alleghaniensis</i>	yellow birch	FAC
	<i>Viburnum dentatum</i>	arrow-wood	FAC

## 2. Planting Guidelines

- 1) The site will be prepared by mechanical or chemical means, or any combination thereof, depending on site conditions.
- 2) Seedlings will be planted on a maximum of 10-foot centers for a minimum initial stand density of no less than 435 trees per acre.
- 3) Selected species will be planted as dictated by terrain and soil conditions to promote biodiversity.
- 4) After planting, the site will be maintained by use of mechanical or chemical controls or some combination thereof, if necessary.
- 5) The mitigation area will be monitored, managed, and protected, as described in the Pennsylvania Statewide Umbrella Mitigation Banking Instrument (PSUMBI) and the Mitigation Site Plan for the CCMB (MSP).

## C. Hydrologic Restoration

Multiple small drainage ditches exist onsite, directing onsite water into Torry Run. These drainage ditches will no longer be maintained. actively degrading the onsite drainage ditches, this action will help restore historical hydrology to the CCMB.

Multiple hummocks within the CCMB that were historically wetlands currently present as non-jurisdictional areas. A small amount of soil layer removal will lower the elevation of these areas, allowing for the necessary hydrology for wetland reestablishment. All grading activity will adhere to the grading guidelines set out in the Chapter 105 permit for the CCMB.

## IV. Stream Restoration Plan

### A. Stream Restoration Activities

1,666 linear feet of minor in-channel rehabilitation and riparian restoration will be conducted on the unnamed tributary to Torry Run (Figure 5). Stream rehabilitation

will be undertaken utilizing Natural Channel Design (NCD) techniques to improve the overall channel condition, stabilize channel banks, and re-establish hydraulic connectivity of flood prone areas.

This unnamed tributary currently flows through a pastured field diverting from its original course because it has rerouted flow as a result of a failed agricultural crossing. Restoration actions, including the removal of obstructions and live stream bank plantings will allow for increased stream functions, including sediment transport, water conveyance and storage and also provide aquatic species habitat.

Live stakes will be installed to provide stream bank stabilization, and supplemental riparian zone plantings will be established. Typical cross-sections for the restoration of the unnamed tributary to Torry Run are included as Attachment A.

2,516 +/- linear feet of channel enhancement with riparian restoration will be conducted on Torry Run (Figure 5). The enhancement measures within Torry Run will focus on invasive species elimination and riparian reforestation. The enhancement measures along the onsite side of the stream will include long-term vegetative stabilization through stream bank live staking and native woody species plantings. Supplemental riparian zone plantings will further enhance the stream health of Torry Run.

### **B. Riparian Zone Restoration and Conservation**

Riparian zone restoration along both sides of the unnamed tributary onsite and along the right side of Torry Run will be conducted to restore native scrub-shrub and forested cover. Currently, the riparian zone in most areas onsite consists of actively grazed pasture lacking both tree and shrub coverage (Figure 8). Heavy native woody stem plantings are proposed to improve the stream and wetland health by filtering runoff, absorbing nutrients, and providing habitat for both aquatic and terrestrial wildlife species.

Invasive non-native species will be managed as described in Section V to allow for the restoration of native coverage species.

## **V. Invasive Species Management**

Existing invasive/undesirable species will be removed from the site through mechanical clearing and herbicide application prior to planting of the CCMB. The planting of appropriate PFO habitat species and the removal of the stress from livestock grazing should allow the native hydrophytic vegetation to outcompete the non-native species currently dominating the CCMB.

Invasive and undesirable species control will be conducted throughout the entire site area over the life of the CCMB. The CCMB will be continuously monitored and maintained as described in the MSP and the PSUMBI, with the Sponsor or long-term steward providing yearly assessments of invasive species and coordinating invasive species management activities with the appropriate regulatory agencies as described in the MSP and the PSUMBI.



## **VI. Further Design Details**

Complete engineering plans may be required for the CCMB restoration efforts. Should engineering plans be required, the Sponsor shall submit final engineering plans for the final comment stage. Supplemental information on the CCMB establishment and management process can found in the PSUMBI and the MSP. Any requests for information on the Mitigation Work Plan for the CCMB may be directed to the Sponsor as described in Section I. A.

## **VII. Joint Permit Application**

RES is preparing and finalizing applications for all necessary permits associated with the CCMB. The Sponsor will obtain all appropriate permits or other authorizations needed to construct and maintain the CCMB prior to Debiting any Credits beyond the initial release. Permit applications for the CCMB must conform to and reflect the requirements for each Bank Site set forth in the PSUMBI, Section I.E. RES will include all associated permits with the CCMB Mitigation Site Plan as exhibits during the final comment phase of Public Notice.

**EXHIBIT 8**  
**PERFORMANCE BOND**



# Mitigation Bank Performance Bond

Bond No. \_\_\_\_\_

Penal Sum: \$ 414,747.00

## Know All Men By These Presents,

That we, **First Pennsylvania Resource, LLC of 380 Southpointe Blvd., Suite 405 Canonsburg, PA 15317** (hereinafter called the Principal), as Principal, and **RLI Insurance Company** with an office at **8 Greenway Plaza, Suite 400 Houston, TX 77046**, a corporation duly organized under the laws of the State of Illinois (hereinafter called the "Surety"), as Surety, are held and firmly bound unto either, as evidenced by the signature below, the **Pennsylvania Department of Environmental Protection (PADEP) of 400 Market Street Harrisburg, PA 17101** or the **US Army Corps of Engineers (USACE) of 1000 Liberty Avenue Pittsburgh, PA 15222-4186** (hereinafter called the "Obligee"), as Obligee, up to the maximum penal sum of Four hundred and fourteen thousand seven hundred and forty seven and 00/100 Dollars (\$414,747.00) (hereinafter called the "Maximum Penal Sum"), for the payment of which we, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into the PSUMBI with the Obligee, dated the \_\_\_\_ day of \_\_\_\_, 2013, which includes the Mitigation Site Plan for [Conneauttee Creek Mitigation Bank](the "Mitigation Bank Site") to ensure that aquatic resources will be restored or established on the Mitigation Bank Site, which PSUMBI and Mitigation Site Plan are hereby referred to and made a part hereof as if fully set forth herein.

WHEREAS, the Principal has applied for Permits for such activities from the U.S. Army Corps of Engineers (USACE) and/or the Pennsylvania Department of Environmental Protection (PADEP) to insure full compliance with all the terms and conditions of US Department of Army Permit \_\_\_\_\_ and/or PADEP Permit \_\_\_\_\_ (Permits).

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that this bond will not be released in whole or in part until the Principal receives written verification from the IRT that the conditions for release in PSUMBI and Mitigation Site Plan and Permits have been met. If the above bounden Principal shall complete construction of the Mitigation Bank Site and meet the final Performance Standards as defined in PSUMBI and Mitigation Site Plan, including any amendments, and received acknowledgment of such from the IRT, then this obligation shall be null and void; otherwise shall remain in full force and effect, subject, however, to the following conditions:

- 1) Upon successful completion of construction and approval of an as-built report, the Penal Sum shall be reduced by thirty percent (30%).
- 2) Obligee will issue a full and final release of this Bond when i) the final Performance Standards, as defined in PSUMBI, are met, or ii) other security, in the amount of and

covering the same obligations stated herein, is posted with the Obligee. This bond will not be released in whole or in part until the Principal receives written verification from the IRT that the conditions for release in the Instrument and Mitigation Site Plan and Permits have been met.

- 3) The Surety's obligation under this bond shall arise after the Obligee has notified the Principal in their failure to abide by the terms and conditions of PSUMBI. Upon notice of the Principal's Default under PSUMBI, the Surety may take one of the following actions:
  - a) Remedy the Default of the Principal to the full satisfaction of the Obligee by a date certain determined by the Obligee, or
  - b) Immediately tender to a party or parties identified by the Obligee the portion of the penal sum that the Obligee determines is due and owing and necessary to remedy the Default. In no circumstances shall such a sum be tendered to the Obligee. Any new party or parties identified by the Obligee under this section shall immediately become a Surety or Sureties to this bond. If the Obligee determines that it is unable to identify such a party or parties, the Surety(ies) shall remedy the Default of the Principal under a) of this section.
  - c) In the event that the Surety(ies) fail(s) to respond within thirty (30) business days to the Obligee's notice of Default, or to honor commitments to the full satisfaction of the Obligee under a) or b) above of this section, the remaining portion of the full penal sum may, at the election of the Obligee, immediately become due and owing and paid to a party or parties identified by the Obligee. In no circumstances shall such a sum be tendered to the Obligee. Any new party or parties identified by the Obligee under this paragraph shall immediately become a Surety or Sureties to this bond.
- 4) Surety shall have no obligation to the Principal, the Obligee or any other person or entity for any loss suffered by the Principal, the Obligee or any other person or entity by reason of acts or omission which are or could be covered by the Principal's general liability insurance, products liability insurance, completed operations insurance or any other insurance.

NOTWITHSTANDING ANYTHING CONTAINED IN THE AGREEMENT TO THE CONTRARY, THE LIABILITY OF THE PRINCIPAL AND SURETY UNDER THIS BOND IS LIMITED TO THE TERM BEGINNING THE \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_, AND ENDING THE \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_, AND ANY EXTENSIONS OR RENEWALS OF THE REFERENCED AGREEMENT SHALL BE COVERED UNDER THIS BOND ONLY WHEN CONSENTED TO IN WRITING BY THE SURETY. IT IS FURTHER AGREED THAT REFUSAL BY THE SURETY TO EXTEND THE TERM OF THIS BOND SHALL NOT CONSTITUTE A DEFAULT BY THE PRINCIPAL, AND SHALL NOT GIVE RISE TO A CLAIM OR DEMAND AGAINST THE SURETY UNDER THIS BOND



In accordance with regulations at 33 C.F.R. § 332.3(n)(5), the Surety shall provide the Obligee notification at least 120 days in advance of termination, revocation, or modification of this bond.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the Obligee named herein, or their heirs, executors, administrators or successors.

Sealed with our seals and dated this \_\_\_\_\_ day of \_\_\_\_\_, 2013.

**Principal: First Pennsylvania Resource, LLC**

By: \_\_\_\_\_  
Name/Title

**Surety: RLI Insurance Company**

By: \_\_\_\_\_  
Greg E. Chilson, Attorney-in-Fact

**Obligee: US Army Corps of Engineers**

By: \_\_\_\_\_  
Name/Title